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Christina Jane Fuller
Wilfrid Laurier University

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Lifestyle, Medical, and Socio-structural Content in the Portrayal of Heart Disease in the Print Media

By

Christina J. Fuller

Bachelor of Arts (Honours), University of Calgary, 2000

THESIS

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Abstract

In this thesis, I examined how cardiovascular disease (CVD) is portrayed in magazines. Analyses of health in the mass media provide insight into the messages that society receives on areas such as disease, wellness, medicine, illness prevention, and health-promoting and health-damaging lifestyles. In this thesis, I reviewed literature on health promotion, population health, and mass media. Through content analysis I examined quantitative and qualitative differences in the portrayal of CVD in terms of lifestyle, medical, and socio-structural content. I compared articles from magazines that are associated with different socio-economic statuses (SES), ages, and genders (n = 104). The findings illustrate that articles mainly focused on medical content (.60), followed by lifestyle content (.33), followed by socio-structural content (.06). These proportions represent the average proportion of each article that was designated as either medical, lifestyle, or socio-structurally related information. There were no major differences in these proportions across articles from magazines directed towards different SES groups, ages, or genders. The focus on individualistic factors of the disease (largely lifestyle and medically oriented) far outweighed the social, political, economic, and environmental factors. The association between poverty and CVD, an undisputed relationship, was almost completely neglected by the articles in this sample. These findings imply that not only do the media present an overly individualistic portrayal of CVD but they may tend to "blame the victim" for his or her illness. Also, the findings suggest that there may be missing links between health research and how media portray CVD. Underlying assumptions in the magazine articles in this study were also outlined, as well as limitations of the current research, and possible areas of future research.

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Personal Preamble

I began this project being intrigued with the concept of health and the idea of promoting health. My interest in this area existed largely because of its substantial overlap with community psychology philosophy. The extent of this overlap was not apparent to me at first, and I was initially suspicious that my interest in the health research field was leading me away from community psychology. "Health promotion," as I thought I understood it, was only generally discussed in my psychology course experience. I was attracted by "savvy" concepts such as wellness, nutrition, and active lifestyles, ideas that fit well with my personal philosophy of living. But as I read more about the broader systemic and cultural aspects of health promotion, it dawned on me that community psychology *is* health promotion, or a cousin closer than I had thought. By examining some of the social ecological aspects of health promotion in this current project, much of which overlaps with the population health perspective, I have investigated important factors in creating and sustaining healthy communities, a key component of community psychology.

Introduction

The promotion of health and wellness is important for the development and maintenance of healthy individuals, organizations, and communities. Along with other health-related fields, community psychology and health promotion share this understanding. Preventing diseases, minimizing poverty, reducing general living struggles and improving the social and physical environment are all vital goals in the move towards healthy communities. There is growing consensus among health workers, researchers, and educators regarding the impact of social and environmental, as well as

individual and biological influences on health (McKinlay, 1996). Addressing these broader, systemic concerns is one way of making positive changes that work toward improving the quality of life for citizens and communities. Often times, however, health promotion efforts focus too much on individualistic factors, such as individual lifestyles, and not enough on broader systemic aspects, such as poor living and working conditions (Frohlich & Potvin, 1999). Both these levels of factors exert important influences on health and should be focused on by agencies and groups working to improve the health of individuals and communities.

The mass media are major conveyors of health messages in our society. They are direct sources of medical advice, and information on health and lifestyle. They also subtly influence the way we make decisions about our lifestyle, medical care, relationships, and other aspects of our lives. In other words, the media have an extremely influential presence in our culture. Examining how media portray particular aspects of health can shed light on major cultural meanings associated with health. The intersection of health and media is the point at which this thesis lies.

The purpose of this thesis is to examine the portrayal of cardiovascular disease (CVD) in the print media in order to further the understanding of how health promotion is presented in the media. Cardiovascular disease is connected to both individualistic lifestyle factors as well as socio-structural factors, and is often presented in the mass media. Analyzing the portrayal of CVD in the media is one way of understanding how the media present the range of health promotion elements of a disease. A review of the relevant literature is presented below, followed by a description of the methodology used

in the article analysis. The findings of the analysis as well as an interpretive discussion of these findings follows.

Literature Review

In the following sections, I review the literature and theory pertaining to health promotion, population health, and mass media and health. Beginning with a brief overview of the concept of health, I describe health promotion and some tensions that exist within the field. Then, I outline three views or perspectives in health promotion: lifestyle, medical and socio-structural. A review of population health follows this discussion with a brief analysis of what the literature suggests about the relationship between health promotion and population health. There is a link between socioeconomic status and health. How this link is viewed by the health promotion and population health models is addressed. Following this section, I provide an overview of the literature on mass media and their role in influencing culture and health. Finally, I review the literature on cardiovascular disease in the media, which leads up to an overview of the current study.

Promoting Health

Health is a complex concept. It is a difficult concept to define, largely due to the wide variety of different meanings that health has for different people or groups of people. To some people health may mean being free of disease and illness. For others, it encompasses mental and social well-being, quality of life, satisfaction with life and happiness; all factors that move beyond the measurement of death, disease, and disability (Hancock, Labonte, & Edwards, 1999). To others still, health may be closely related to a sense of control over one's life and one's living conditions (Labonte, 2000) or being able

to access high quality food in order to adequately nourish oneself, both of which highlight elements outside of the person that influence health. Health is directly influenced by societal structure, and the way that society functions. The structure of social classes, access to resources, the political climate and the economic situation all shape the way people live, act, react, and consume. These factors in turn contribute to health and well-being. Calnan (1987) puts forth the idea that middle class individuals tend to include psychological and positive well-being aspects in their definitions of health, and working-class people tend to emphasize more negative and functional aspects. This difference may have implications for the type of health promotion programming that works best for groups of different socio-economic status. Overall, the idea of being healthy carries an extensive number of meanings.

The World Health Organization refers to health as a "resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities" (WHO, 1986, p. 1). While this reference to health acknowledges the comprehensiveness of what constitutes health, it does not seem well matched with the current health care system that dominates western society, referred to by some critics as a "sickness care system" because of its prescriptive and treatment focus (Evans & Stoddart, 1994).

The idea of *promoting* health is an even more cumbersome concept because of the wide variety of ways of describing health mentioned above. The concept of health promotion emerged officially in 1974 with the publication of the Lalonde Report by the Minister of Health at the time, Marc Lalonde (Lalonde, 1974). The report addressed a collection of recommendations that sought to shift the focus of Canadian health care from

a treatment orientation to include a more preventative approach. This prevention perspective is more concerned with examining and supporting methods of avoiding or minimizing ill health rather than focusing on problems once they have become evident. Health promotion embraces this concept of prevention, but also goes one step further and encompasses a more positive or wellness understanding of health instead of a problem or illness focus. Health promotion appears to be a promising perspective for conceptualizing health. Its promise lies in its emphasis on the preventative or "upstream" take on disease in addition to its focus on the positive well-being of not only individuals but of communities and populations as well. Herein lies the common ground between health promotion and community psychology.

Among other activities, community psychology works to identify social structural barriers to equality and justice for all, and to work with citizens to not only bring attention to these barriers but to alter them for the health of all individuals. In a community health promotion model, it is usually the communities that define their own problems or concerns and proactively work to develop strategies to ameliorate these issues (Labonte, 1996). Participating in the identification of preventative measures and structural components of a problem becomes a way in which a community is able to take control over the issues that concern them (Labonte, 1996). Community based health promotion activities emphasize social context and work through community structures such as neighbourhood organizations, schools, work and leisure settings (Pancer & Nelson, 1996). Pancer and Nelson (1996) outlined guidelines for mobilizing communities for the sake of promoting health. These guidelines include involvement by the community, professional and community collaboration, a thorough assessment of a

community's needs and resources, alteration of a community's norms, and research and evaluation. Promoting the health of individuals and communities through education, participation, and empowerment is an important element of both community psychology and health promotion.

There is an array of internal conflicts throughout the theory and practice of health promotion. This struggle has to do with many factors including the fact that it initially emerged in a different political (and fiscal) climate than it currently exists in and has had to fight an uphill battle for recognition and legitimization. In addition, the field has to deal with ongoing negotiations concerning its very definition. Often times in practice, health promotion focuses on lifestyle, rather than on social structural or environmental determinants of health. Focusing on changing people's unhealthy behaviour and lifestyles can be effective ways of improving people's health. However, the narrow focus on lifestyle alone has the tendency to directly or indirectly place the responsibility of health on the individual. This focus can potentially lead to a climate of victim blaming (Leichter, 1997; Rootman & Raeburn, 1994). The need to expand the focus to include the broader determinants of health is the impetus that led to the beginnings of the population health model of health, a perspective that considers the social, environmental, political as well as the individual influences on health. This model has become increasingly emphasized in recent decades and will be discussed later. A brief examination of the varying perspectives of health promotion will help to unravel the complex factors that underlie this area.

Different Views of Health Promotion

Although the literature does not usually explicitly divide health promotion into distinct categories, authors tend to discuss the field within different spheres. As previously mentioned, a number of tensions exist within this literature. These tensions have to do with factors such as level of target population (individual vs. community), the very definition of health promotion, and its outcomes (Frohlich & Potvin, 1999). Labonte (1995) argues that while there is abundant evidence of different practices based on narrow as well as broad views on how to promote health, there is still some consensus on the basic practice principles. Overall, the literature can be located within three different types of perspectives: the "lifestyle view," the "medical view," and the "socio-structural view." Clarke (1991) applied similar groupings to models of health and illness, but they can also be applied to views on health promotion or on approaching health problems (Labonte, 2000).

The Lifestyle View

The lifestyle groupings of activities and research focus on behavioural aspects of promoting health. From this perspective, health is best understood as the result of individual behaviours related to exercise, stress management, diet, smoking, substance abuse, sexual habits, and safety practices such as seat belt use (Clarke, 2000). Health is seen as a positive, wellness focused concept. Promoting health via smoking cessation programs, increased physical activity and improved diet are examples of lifestyle based health promotion strategies. While these strategies may attempt to focus on community level processes of change, most often individualistic behavioural risk factors become the ultimate criteria for determining the effectiveness of these interventions (Frohlich &

Potvin, 1999). This perspective tends to place the onus of one's health on the individual, instead of considering the broader external factors. In fact it discretely allows society to ignore equally important factors that determine health, those found in the social environment that not only create certain lifestyles but also inhibit others. Becker (1993) suggests that the individualistic trap that health promotion often falls into fosters a dehumanizing self-concern that substitutes personal health goals for more important societal and human goals. He suggests that people must work to turn our inward, self focused goals into outward concerns for the sake of our society and humanity. While perhaps popular in the media and our current culture in general, the lifestyle approach to health promotion is not without its critics.

The Medical View

The second perspective takes a more anti-disease or medical-focused approach to health. While similar in its level of analysis as the lifestyle view (individualistic) many of these activities are more closely associated with specific disease prevention rather than wellness promotion. From the medical model perspective, disease is an objectively measurable pathology of the physical body resulting from the malfunctioning of different body parts (Clarke, 2000). Examples of medically oriented health promotion interventions might include mammography promotion in women over a certain age to detect the presence of breast cancer and cholesterol level testing to advise lifestyle changes that are possibly linked to cardiovascular disease. Many notions of health promotion could arguably be equally placed in both the lifestyle view and the medical view (e.g., increased consumption of fruits and vegetables to experience improved wellness *and* to prevent some forms of diet linked cancer).

The Socio-structural View

The socio-structural view of health promotion examines the systemic aspects of society that act as barriers to health and wellness for various segments of society. From this perspective, disease is best understood as the result of inequalities in the make-up of class, gender, age, ethnicity, and environmental conditions such as air and water pollution, hazardous and stressful work conditions, as well as detrimental organization of central societal institutions such as the family and education system (Clarke, 2000). Those who share this view suggest that the ultimate way of promoting health is by altering those structures that inhibit equal distribution of health determinants. The socio-structural view is closely related to the population health approach to health, which examines the broad social and environmental determinants of health and will be discussed in the next section. Many authors in the health promotion field draw on population health and other collective philosophies to improve the effectiveness of health promotion. For instance, Breslow (1996) outlined suggestions for social ecological strategies for promoting healthy lifestyles. Frohlich and Potvin (1999) put forth collective lifestyles as the best target for health promotion interventions. Labonte (2000) discussed using community empowerment and leisure to promote healthy communities. Hayes (1999) brings the two approaches together in "Population health promotion: Responsible sharing of future directions" where he discussed the middle ground between health promotion and population health and their potentially powerful impact on human well-being.

The principles of community psychology are based on an ecological understanding of individuals. An ecological perspective believes that the social, physical,

political, and economic environment exerts a significant amount of influence on human behavior and therefore this behavior can be managed or changed through acting on environmental influences (Levine & Perkins, 1997). The socio-structural perspective of health promotion overlaps with many of the principles of community psychology. This overlap is mainly a result of the common emphasis on systemic aspects of society and how injustices within these structures affect the health and well-being of individuals and communities. Analysis of the ecological factors that affect well-being is an important component of community psychology. It is the identification and alteration of these factors that eventually lead to systemic change. Working with community members to accurately identify what elements need attention and what the best methods are for attempting amelioration is part of the essence of community psychology.

Political Factors

Health promotion is tied to multiple political factors. Related to a discussion of socio-structural factors, Clarke (1991) referred to the political economy view on health (McCormack, 1981), a model that views disease as resulting from inequities in the social system. As these inequities include those that are based on gender, ethnicity, income, social class, and age, this model draws attention toward the structural, environmental components that affect health, in the similar manner that the population health approach does (see below). Examining the broad social, political, and economic factors that affect health and well-being shifts the focus of health promotion to being less concerned with changing people's behaviours and more concerned with analyzing where true inequities lie. This type of broad or ecological analysis sheds light on how the structure of one's environment affects people's lifestyle decisions and health (Stronks, van de Mheen,

Looman, & Mackenback, 1996). This comprehensive perspective critically works to untangle and reveal underlying impacts on health that are often camouflaged by the overemphasis on an individualized focus on health.

Health promotion policies and programs that are geared towards improving the lifestyles of individuals are often endorsed by governing bodies. These programs serve to reinforce the individual responsibility components of health that usher the blame away from policies and onto the individual (Raphael, 2002). Robert Crawford (1994) outlined the economic driving force that shifted health care toward individual responsibility at the end of the 20th century. Due to the tax-cutting agenda of the elected, conservative governments at the time, there was less money available for social services and health care support than there had been previously. Crawford pointed out that, because government agencies could no longer afford to provide high quality health care to the growing population, they began to shift their focus onto the good and bad practices of the individual (Crawford, 1994). This fiscal conservatism is at the centre of the current debate around Canada's health care system. The increasing move toward relying on private, for-profit agencies as a "second-tier" to the current health care system for those who can afford private health services, is a controversial result of tight finances in the area of health and social services. This current issue goes beyond the scope of the current project and will not be addressed further in this thesis.

Publication of Canada's 1974 Lalonde Report was a major thrust in the shift towards individualism because of its emphasis on prevention and lifestyle aspects of disease. In his book *The Tyranny of Health,* Fitzpatrick (2001) discussed the political ramifications of this endorsement of health promotion and individualization of

responsibility of health. He outlined victim blaming elements that are found in health promotion policy and literature. For example, he referred to certain messages found in Britain's Department of Health and Social Security (DHSS) documentation as overtly victim blaming:

> Much ill-health in Britain today arises from overindulgence and unwise behaviour. The individual can do much to help himself, his family and the community by accepting more direct responsibility for his own health and well-being (DHSS, 1977).

Some critics feel that health promotion ideology is purposely shifting the responsibility for illness from the state to the individual. In fact, Fitzpatrick suggested that health promotion's wide reach into every corner of people's lives served as a "sophisticated instrument for the regulation, not only of individual behaviour, but that of whole communities" (p. 95). Because of their involvement in so many aspects of people's lives, health promotion programming and policies have the potential to impact people in many different ways by those groups who implement them. The large domain that health promotion retains interest in, includes the home, workplace, school, neighbourhood, and relationships within these structures. In addition, health promotion programming and ideas seep into every aspect of the life-cycle: pre-conception counseling, pregnancy, infancy, childhood and adolescence, not merely women's health, but also men's health, menopause (and the male mid-life crisis), old age as well as death (Fitzpatrick, 2001). It seems that the potential for the regulation of every element of lifestyle falls under some health promoting policy or program, which touch all aspects of our lives.

The regulatory element of health promotion over aspects of people's lives is seen by some as an over-extension of government power. The adoption of health promotion by mainstream bodies as a form of social control is an idea that has been put forth by many critics. Lupton (1995), for example, conceptualizes health promotion and public health as clear representations of governments' attempts to regulate the activities of individuals and groups. While the use of community-driven programming by government agencies to identify and address needs of communities may seem like an empowering way of promoting health, Lupton (1995) also identified an inherent contradiction within this type of activity. While attempting to empower individuals, community-driven, health promotion programming retains a paternalistic relationship with those being targeted because the more powerful body is attempting to empower the least powerful groups in society often without giving them rights or responsibilities (Lupton, 1995). Skrabanek and McCormick (1989) defended personal liberty and freedom against "healthism" and view health promotion as the policing of lifestyle and the denial of pleasure. Skrabanek (1994) describes the current obsession with health as a dangerous past time and sees the "pursuit of the Holy Grail of Health [as] driven by the mistaken belief that health equals happiness" (p. 40). Indeed, the implementation and focus on the promotion of healthy lifestyles and personal health practices by governing bodies may serve an individualistic agenda that points the finger at behaviours, diverting attention away from existing societal structures that should actually be implicated in the state of people's health. Thus, it is increasingly important for health researchers and media bodies to emphasize the social and environmental influences on health. Through a

broader examination of the determinants of health, the root cause of ill health can be addressed (Labonte, 1995).

Population Health

In order to understand the occurrence of disease in populations, the population health perspective analyzes the contextual, social, and environmental determinants of health, in a complex and dynamically interacting framework that also includes biological determinants (Frohlich & Potvin, 1999). By focussing on the interrelated factors that affect health and well-being, population health serves as a catalyst for broadening the scope of the definition of health to include society's structural and environmental conditions in addition to the traditional notions of health. An understanding of population health is well suited to the discussion on social structural elements of health promotion in the context of community psychology.

The determinants of health include social support networks, income and social status, social cohesion, personal health practices and coping skills, quality health care, education, employment and working conditions, physical and social environments, healthy child development, gender, culture, health services and biology and genetic endowment (Butler-Jones, 1999; Health Canada, Population and Public Health Branch AB/NWT/Nunavut, 1999). By examining these broad factors that impact health, population health is concerned with ensuring that the basic needs for all are met, adequate levels of economic and social development are achieved, supportive and respectful social relationships are nurtured, and the quality and sustainability of the environment are secured (Hancock, Labonte, & Edwards, 1999). Population health invites acknowledgment of the social inequities and issues of social justice that plague the health

of our society. It also accepts the fact that health is a shared responsibility that is engrained in the social structure of which we are all a part (Hayes, 1999).

While population health and health promotion have similar understandings of health and share a common objective of long term health for society, they generally tend to exist on different planes. Population health, for example, deals with the broad, aggregate level of health in relation to the societal and environmental structure, whereas health promotion has had a tendency to focus on the behavioural level. Frohlich and Potvin (1999) suggest that population health research may provide the needed insights to advance the theoretical development of health promotion. Similarly, health promotion research could provide the needed insights for the development of effective population health strategies. The exact way that these two disciplines of health can most effectively inform each other is still a new area of development among academics and health workers. Simply promoting healthy behaviours in large groups of people as opposed to just one individual, does little to actually affect the health and well-being of future generations. In order to have a true impact long-term systemic changes must be realized (Frolich & Potvin, 1999; Labonte, 1996; Raphael, 1998). This change involves addressing the behaviour and lifestyle factors at the basic health promotion level, as well as broader systemic and environmental factors at the population level that create an environment that is conducive to individual change.

Major Determinant of Health: Socio-Economic Status

Generally, people from low socio-economic backgrounds have poorer health and higher mortality than those people from higher socio-economic backgrounds (Kawachi & Kennedy, 1999; Wilkinson, 1986). Research on the social determinants of health has

consistently suggested that level of income is the most important determinant of health (i.e., Kawachi & Kennedy, 1999; Marmot, Ryff, Bumpass, Shipley, & Marks, 1997; Wilkinson, 1986). After reviewing several studies from the United Kingdom and the United States, Marmot and colleagues (1997) confirmed that there is a social gradient involved in the relationship: ill health, poor psychological well-being, and mortality all rise with decreasing socio-economic status. Also, individuals living on low-income have poorer physical functioning than those living on higher income regardless of their disease status (Hemingway, Nicholson, Stafford, Roberts, & Marmot, 1997). There is an increasing gap between the rich and the poor, and communities in which this difference is smaller experience better health than communities with large income differences (Bezruchka, 2001; Raphael, 1998).

Research has shown that societies with greater disparities between the incomes of low and high income earners have poorer overall health than those societies with more equitable distribution of resources (Evans, 1994; Kawachi & Kennedy 1999; Raphael, 1999). One study found that individuals living in societies with greater income inequalities were 30% more likely to self report their health as fair or poor than individuals living in societies with smaller income inequities (Kennedy, Kawachi, Glass, Prothrow-Stith, 1998). Numerous theories as to why this relationship between income inequality and health exists have emerged in recent years. These theories include lowered social spending, eroded social capital (interpersonal trust, norms of reciprocity, mutual cooperation), and the effect of social comparison between the poor and the rich (Kawachi and Kennedy, 1999). Clearly, the systemic components of the economic structure of society are directly related to the health of our communities and may be equally as

important to the health of individuals and communities as behavioural and lifestyle factors. Bezruchka (2001) summed this idea up when he said, "The effects of the usual do's and don'ts that we all preach pale in comparison with the effect of society's structural factors on population health, especially the amount of hierarchy as measured by income distribution" (p. 1701).

According to Raphael (1999, 2000), economic inequality leads to poor health in three ways. Firstly, the poverty associated with low-income areas is an important precursor of death and a variety of health problems. Poverty can have direct effects on health, such as lack of materials and resources such as healthy food and access to health services (material deprivation), as well as indirect effects on health, such as psychosocial stress (lack of control, feelings of hopelessness, loss of esteem). Secondly, low-income areas have less money available for services and social safety nets which can be important contributors to health. Lastly, unequal societies produce an increasing division and alienation between the rich and the poor, thereby weakening social cohesion and community ties that lead to poor health. Such social disintegration leads to a decline in civil commitment, personal civility, well-being, and the health of the population (Raphael, 1998). This summary illustrates the complexity of the relationship between socio-economic status and health.

The relationship between health and socio-economic status has been attributed to both the structural aspects (e.g., income differences, material differences) as well as to differences in lifestyle behaviours (Marmot, 1986; Stronks, van de Mheen, Looman, & Mackenbach, 1996). Both of these have important implications for health promotion intervention strategies for reducing the unequal distribution of health and wellness.

People from low socio-economic areas are more likely to smoke tobacco, have a poor diet, have lower incomes, as well as have other contributing factors that lead to diseases (Hertzman, Frank, & Evans, 1994; Lynch, Kaplan, & Salonen, 1997). In reality, it is unlikely that poor health behaviours are independent of the social environment in which one lives. In a discussion on social ecological strategies for promoting healthy lifestyles, Breslow (1996) supports this point. He distinguishes between environmental circumstances that negatively influence lifestyle decisions by encouraging "bad habits" and environmental circumstances that influence lifestyles largely regardless of decision and choice. Lynch, Kaplan, and Salonen (1997) confirmed that people of low-income status tend to have higher rates of unhealthy lifestyles and added that this difference was consistent across the life span. In other words, the results from this study indicated that health-related behaviours and psychosocial characteristics of adults tend to be associated with the social class of their parents. These authors also suggested that while poor health habits cluster in the lower SES groups, the association between SES and lifestyle behaviours is not a simple relationship: "A disadvantaged socioeconomic lifecourse pathway does not necessarily make choices of good health behaviour impossible" (p. 817). All in all, the research in this area suggests that reducing health inequalities requires more equitable distribution of resources and income in society (Lynch, Davey Smith, Kaplan, & House, 2000).

Some theorists have noted that the causal direction between health and socio-economic status may be two-way: Health may determine socio-economic position as well as social circumstances may affect health (Marmot, 1999). A theory that implicates health as a determinant of social status has been termed health selection (Marmot, 1999).

According to this theory, health, or the health situation of one's parents, may be a major determinant of life circumstances. Blane (1999) suggests that a person's past social experiences may affect their health, which in turn affects their social status. For example, if a person who works in the mining profession develops emphysema, this illness may hinder his or her ability to continue working as a miner, or advancement in the field (Blane, 1999). This person's income and thus social status is affected by their employment experience. Theories of health selection or dual direction causality between health and socio-economic status contribute to the understanding of the complex relationship between health, environmental conditions and socio-economic status.

The mass media play a critical role in creating and sustaining society's cultural and structural environment. Not only do they keep society informed of local and world happenings, but they also seem to contribute to the very understanding that society has of itself. The next section reviews the literature on the general influence of mass media in society as well as their influence on health and the field of health.

Mass Media

The mass media represent a significant avenue by which health information and other information make their way into the lives of communities and individuals. Through television, newspapers, and magazines, a world of information becomes integrated into our culture. The mass media contribute to the creation of our culture and ideologies while at the same time serve as indicators of our cultural images and values (Clarke, 1999; Signorielli, 1993). With increasing pervasiveness in the past century, the media have edged their way into every corner of our lives and have become major influences in our understanding of world events. Not only do they outline *what* we should think and

talk about, but they also quietly influence the *way* we think of and view these events (Nelkin, 1987). Media are relevant to any discussion on social, contextual, and cultural influences on health and well-being because of this systemic presence. Television, for example, has become a dominant conveyor of information, and for the first time in human history, this centralized commercial institution, rather than parents, school and church, has become the major vehicle for the socialization for this generation of children (Signorielli, 1993). This information includes positive as well as negative information, descriptions of who in society holds power and who does not as well as what is good for us and what is bad for us (Signorielli, 1993). The media educate, inform and convince us daily on a wide variety of topics and are important sources of health information (Signorielli, 1993).

Media messages are situated within a context of political and cultural assumptions (Nelkin, 1987; Philo, 1990). News information, for example, is presented in a manner that is subtly premised by various beliefs about social hierarchies, what behaviours are considered to be "normal" and "acceptable," and what institutions are deemed to be important (Philo, 1990). Nelkin (1987) discusses how the media's choice of topic and the way that it covers an area influence public policy. For example, by creating public issues out of events or research findings, the media can force policy making agencies into action simply out of concern for their public image (Nelkin, 1987). Also, by focusing on certain research findings more than others, the media influences the amount and allocation of financial support given to research and may also affect the interests of researchers themselves towards or away from different issues (Nelkin, 1987). By analyzing what the media cover and how they cover it, it is possible to capture a reflection of our current

society. At the same time, one can study a major influential stream of information that is being conveyed to society. Examining this information is a way to discern society's understanding of the world.

Mass Media and Health

The mass media are major sources of health information. One need only turn on the television, the radio, or open a newspaper or magazine to discover a stimulating world of health information, advice and warnings. With the high prevalence of television watching and widespread print media circulation it is no wonder that people use these to inform and guide them on health matters and decisions.

Unfortunately, many positive health messages are lost or overshadowed by an enormous amount of irrelevant or negative information through advertising, false claims, self improvement ploys and outrageous stories that are printed more for the sake of catching readers' attention and selling a product than to truly inform the reader (Signorielli, 1993). The media propel hyped health information at consumers through exaggerations and entertaining facts. Signorielli (1993) suggests that society is hooked on these health messages and that truly important health risks and information may be ignored because they lack entertainment value.

A variety of research has been conducted on the role of media in influencing people. Media research studies have often focused on the negative effects of advertising and the entertainment media as well as the potential for using media to influence people to make healthier decisions and live healthier lives (Brown & Walsh-Childers, 1990). Examples of negative effects include the media's portrayal of women's ideal body type as extremely thin, which has become an unattainable goal for many women (e.g., Malkin,

Wornian, & Chrisler, 1999). Images of skeletal women litter the media and create unwarranted feelings of inferiority in women who feel they must aspire to be like the ideal images and yet are not able to do so. Media are used widely for the sake of influencing people's health attitudes, lifestyle choices and overall knowledge on health matters. These strategies are typically linked to various organizations' efforts at promoting health or encouraging cessation of health risk behaviours such as smoking. Health promotion initiatives that make use of media campaigns to raise awareness or the health knowledge in a community have been shown to be effective (Alcalay, 1983; Pancer & Nelson, 1996).

One area of past research emphasizes the idea that when health and strategies to promote health are featured in the media, often times the primary sources of social and health problems are assumed to reside in the individuals' personal lifestyle choices or biological makeup (e.g., Daykin & Naidoo, 1995; Labonte & Penfold, 1981; Nelkin, 1987; Wallack, Dorfman, Jernigan & Themba, 1993). Health interventions that use various forms of media to further their cause tend to target individuals' behaviours. This practice reinforces an individualistic focus. The resulting effect may be victim-blaming and defining a problem in terms of apparent individual deficiencies or lack of positive behaviours. The individual is seen as being at fault because of choices that person has made in his or her lifestyle.

Wallack and colleagues (1993) suggest that the narrow focus that is often such a large part of media health campaigns is closely linked to philosophies of self-determinism and individualism that dominate western culture. This focus distracts attention away from the causes of much ill health which are embedded in broader, ecological factors.

The social, political, economic, and environmental influences on health are deemed less important than behaviours and decisions evoked by individuals, but, in reality, it is these broader factors that are also implicated in the root cause of ill health (Raphael, 2001). While lifestyle choices made by individuals are mediated by contextual forces, the media tend to reduce health issues to individual level concerns, which reinforces the existing social and economic arrangements (Wallack, 1990).

In general, health messages transmitted through the media are influential in society because of their ubiquity and the cumulation of messages over time (Finnegan, Viswanath, & Hertog, 1999). Health and other information often becomes newsworthy when it can be packaged into a personal story with a strong human interest slant (Meyer, 1990). For example, the emotional story of a person's battle with a serious illness is something that people can understand easily, while the social and environmental causes tend to receive less media attention. In this way, events and developments fit into existing social constructs and are not offensive to the largely middle-class readership (Meyer, 1990; Nelkin, 1987). In this format, health articles appeal to readers' emotions and maintain the status quo, but do little to uncover the true roots of disease and illness. Using the media as a tool to address structural inequalities may be one way of bringing the broader influences on health into the forefront. As was discussed above, the inequitable distribution of resources in society is a leading cause of higher rates of diseases in some populations (Wallack et al., 1993). Wallack and colleagues (1993) suggest that media advocacy, the use of media by public health to amplify important health concerns, can be used to effectively guide public attention away from illness as an individual issue toward the issue of social roots and social concern.

Print Media

Magazines are an interesting point for studying health messages because of the type of information that they usually contain. Often, magazines report on medical information in a way that their readers can understand or be interested in. "[Magazine knowledge] reports and comments upon medical findings, extrapolates and interprets these findings for the general reader and makes judgements about the quality of that knowledge" (Bunton, 1997, p. 232).

Previous analyses of magazines have demonstrated that most of the messages about health tend to have an individualistic focus or medical model vision of health. Fisher, Gandy, and Janus (1981), for example, reviewed articles in three prominent magazines between 1959 and 1974, a period of time just before the health promotion perspective became prevalent in the health care community. These authors found that significantly more articles focused on the behavioural causes or predisposing factors affecting disease than social and environmental factors. The authors concluded that the three magazines that they examined had a tendency to perpetuate the victim-blaming perspective of disease causality and treatment. In an analysis of the portrayal of cancer, heart disease, and AIDS in the print media from 1980 to 1987, Clarke (1991) found similar results. In this study's sample, 58% of magazine articles focused on the medical perspective, 38% focused on the life-style perspective, and only 6% focused on the political economy or socio-structural perspective.

The messages that media are sending reinforce in the general population the idea that health exists almost entirely in the actions, decisions, and biology of the individual. While epidemiologists and other researchers have known for years that social structure is

one of the most important determinants of health, the media continue to divert the population's attention away from this fact toward individualistic explanations. Through this diversion, the media, which are largely corporate-owned, profit-driven institutions, serve to maintain the status quo. Because of this corporate control, the messages portrayed by the media tend to represent narrow interests and rarely challenge existing social arrangements or offer divergent, alternative perspectives (Wallack et al., 1993). Raphael (1999) has noted the remarkable absence of coverage by the media of the relationship between economic inequality and health. For the most part the media continue to focus their health messages on individualistic notions of health instead of broadening this perspective to implicate societal institutions.

Analyzing health promotion in the media is a difficult task because of the enormity of the subject matter. While academic and public health literature often discusses the concept of promoting health, the print media do not often focus on the concept specifically. Instead, promoting health emerges in the print media through a wide range of health-related topics but is rarely labeled as "health promotion." Westwood and Westwood (1999) examined two models of health that appeared in articles in an Australian newspaper during 1994 and 1995. Using content analysis they compared the items that fell under two broad categories: medical model and public health model. The medical model included items dealing with medical interventions or treatments, scientifically based procedures, technology, and institutionally based care. The public health model included items related to health promotion and primary care, many of which are related to issues of lifestyle. The researchers found that public health issues were presented less often, less prominently, and less positively than medical model issues. The

authors found that their definitions of the two models of health overlapped. Often, health promotion factors fell into the medical model, but were coded as public health because of the way they had defined the two categories.

I began this project determined to examine how health promotion is presented in the media. It soon became clear to me that it was necessary to narrow my focus in order to investigate this issue. As the following sections will illustrate, I have chosen to examine one type of disease in the print media as a way of managing the immense ways that the print media present health-promoting ideas.

Cardiovascular Disease

Diseases of the cardiovascular system are one of the leading causes of deaths in Canadians (Statistics Canada, 1997). The relationship between lifestyle behaviours and the development of cardiovascular disease (CVD) has become an area of intense interest in recent decades. However, some health research indicates that economic and social conditions that people live in may be more detrimental to the health of people's hearts than medical treatments and lifestyle choices (Raphael, 2001). Some research has suggested that while high rates of heart disease in low-income populations is due in part to unhealthy behaviours, these behaviours only explain a small proportion of differences in mortality between income levels (Lantz, House, Lepkowski, Williams, Mero, & Chen, 1998). Lantz and colleagues suggested that policies and programs geared exclusively towards individual risk behaviours have limited potential in reducing heart-health disparities based on income level, and that more public health resources need to be focused on socio-economic factors.

Raphael (2001) authored a report that highlighted how low-income and social exclusion may be just as detrimental to the development of heart disease as certain lifestyle factors. How social exclusion is linked to low-income is through material deprivation, lack of participation in common social activities, and exclusion from civic decision making processes (Raphael, 2001). One of the purposes of Raphael's report was to "present the reasons why the focus on medical treatments and lifestyle risk factors as a means of reducing the incidence of cardiovascular disease in Canada is an inadequate approach to the problem" (p. 3-4). People in low-income situations are disadvantaged in ways that include limited access to health care and healthy resources, lack of material wealth and greater likelihood to engage in health threatening behaviours (Lantz, House, Lwpkowski, Williams, Mero, Chen, 1998; Stronks et al., 1996). In combination with government policies that limit access to basic resources, Raphael (2001) suggested that low-income is, in fact, a major cause of cardiovascular disease in Canada. Evidently, there may be a gap between what the media portray to be important about this disease, and what actually appear to be the most important aspects of the disease. Unanswered questions surrounding how the media address or neglect to address socio-structural aspects of the disease is a major impetus for the current research study. A review of the research that has examined cardiovascular disease in the media follows.

Cardiovascular Disease and the Media

Research studies over previous decades have suggested that diet, physical activity, and smoking habits have direct influences on CVD (Fitzpatrick, 2001). The mass media have focused on the implications that this relationship has on the way that people live their lives and have become major vehicles in the transmission of lifestyle-oriented,

heart-health promotion information. A study on cardiovascular disease (CVD) prevention programming in a southern Ontario community found that the print media were the most preferred sources of information on healthy eating. In the same study, print media were second only to local recreation centres as preferred sources for physical activity information related to heart disease prevention (Paisley, Midgett, Brunetti & Tomasik, 2001).

Finnegan, Viswanath, and Hertog (1999) found that during the period of 1980 and 1992 heart disease was a constant element in the media's repertoire of news stories. Through analysis of newspapers and television news stories, they found that there was an increase in media coverage on cholesterol and heart disease as well as methods of heart disease prevention through lifestyle changes; aspects of the disease that were gaining importance in research and public health circles. These researchers discussed how media coverage of heart disease is directly influenced by organized activity including scientists, CVD specialists, public health advocates, and government agencies. In addition, Finnegan, Viswanath, Kahn, and Hannan (1993) found that people of higher education and socio-economic status received higher exposure to print media information on cardiovascular disease than people of lower education levels and socio-economic status. This finding was relevant for print media, but not for exposure to cardiovascular information on television.

Researchers have examined gender portrayals associated with disease in the media. Fisher, Gandy, and Janus (1981) used content analysis to examine health-related information in three prominent magazines between the years 1959 and 1974. They examined how men's and women's roles were portrayed in health articles. Among other

findings, they found that heart disease was not considered to be a serious problem for women by the media, despite the fact that it is one of the major killers of women over 50. These researchers also reported that women were portrayed as the caretakers of their own health as well as their husbands' health, a notion associated with traditional gender roles.

Clarke (1991) found that in a sample of 88 articles that appeared during the period of 1980-1987 on CVD, 77% were within the medical model, 23% were within the lifestyle model and none of these articles dealt with socio-structural elements of the disease. Clarke's sample was based on all of the articles that were indexed in the *Reader's Guide to Periodical Literature* under "heart disease" between the years 1980 and 1987 from six mass-circulating magazines. This sample included men's, women's and news magazines: *Maclean's, Reader's Digest, Newsweek, Time, Ladies Home Journal,* and *Good Housekeeping.* The analysis used in this study involved an overall classification of each article in the sample into one of three categories (political economy, life-style, or medical) based on the predominant content in the article. Those articles that addressed medical aspects of the disease tended to place treatment for the disease in the hands of medical professionals and focused on the hopeful alternatives that innovative medical discoveries offer. Those articles that focused on lifestyle factors in this study urged readers to change their daily lifestyle habits. The fact that these articles focused on elements of the disease that are individualistic in nature more than the broader elements is a reflection of what society understands about the disease (Clarke, 1991). Possibly, the media are portraying information that serves largely to blame the individual for his or her health predicament and leaves the reader with little understanding of the true factors underlying heart disease. Furthermore, the portrayal of this disease reflects the low level

of importance placed on the socio-structural components of the disease by society, and thus the likelihood of improvements in structural inequities (Clarke, 1991).

In another media analysis of CVD, Brännström and Lindblad (1994) examined the ways in which a community-based CVD preventive program in Sweden was reported by the Swedish mass media. They found that newspapers, radio, and television coverage overemphasized the individual and lifestyle elements of the disease and "placed very little emphasis on the conditions that largely determine the health of the community, such as the external environment and social and class-related factors" (p. 33). The main message that these researchers gleaned from their analysis is that health is something that the individual can influence. They felt that the focus on stories of successful lifestyle changes emphasized the importance of individual responsibility in health matters which renders any collective responsibility for health as a secondary notion. As has been outlined in this section, various research projects have examined CVD in the media. None of these studies has specifically examined this disease from a health promotion perspective, which will be the main contribution of the current study.

Current Study: Cardiovascular Disease in the Print Media

In order to examine the relationship between health and the print media, the analysis in the current project focussed entirely on the portrayal of heart disease in magazines. Keeping this narrow focus allowed me to examine one element of health and health promotion from a variety of angles. This focus on heart disease is appropriate for this study for a number of reasons. These are:

1. Heart disease is presented in the media often (Finnegan, Viswanath, & Hertog, 1999).

2. Heart disease is commonly associated with lifestyle or other individualistic factors (Fitzpatrick, 2001).
3. Some research suggests that heart disease is linked to environmental and socio-structural factors such as poverty as well as to lifestyle or other individualistic factors (Lantz, House, Lwpkowski, Williams, Mero, Chen, 1998; Raphael, 2001).

Current Research Questions

The promotion of healthy lifestyles and healthy attitudes is useful if the environment is conducive to supporting these individualistic ideas. If the media remain focused on printing articles about immediate, lifestyle-oriented health messages and do not address the broader root causes of ill health, they are conveying misinformation to the public concerning the root causes of ill health. If, on the other hand, they print more accurate information on the actual root causes of ill health and thereby draw attention to the significant environmental and structural influences on health, communities will be more accurately informed about their health. This type of information has the potential to empower people to advocate for improved health for their families and communities through social change. As discussed previously, lower socio-economic groups in society experience higher levels of illness, including heart disease. Some research has suggested that part of the reason for this difference in heart disease may be a lower awareness of preventive measures and risk reduction among individuals and groups with minimal education (Davis, Winkleby, & Farquhar, 1995). In the current project I will compare the health messages that are portrayed to different socio-economic groups in the print media. Possibly, magazines geared toward lower SES groups may carry fewer messages of preventive measures and risk reduction.

I am also interested in examining this distribution across publications geared toward different age and gender groups. Heart disease tends to develop in adults who are middle-aged or older. It would be interesting to examine magazines geared toward different age groups to see if the distribution of information on CVD is consistent with the age of disease development. Potentially, magazines that are geared toward younger populations may carry more CVD prevention information and magazines geared toward older populations may carry more coping or treatment information.

It would also be interesting to examine differences in heart disease information between men's and women's magazines. Cardiovascular disease has traditionally been thought of as a man's disease, but research and statistics in recent decades have shown that men and women are affected equally by the disease, but at different stages in their lives. I will investigate whether or not the media represents this understanding of heart disease. It would also be interesting to see if men's and women' magazines still reflect traditional gender associations of heart disease as they have been shown to do in the past (Fisher, Gandy, and Janus, 1981).

In addition, I will be examining how the concept of prevention is portrayed in the print media. The concept of preventing disease, illness, or life difficulties is an important aspect of health promotion and community psychology. Primary prevention refers to intervention efforts that are given to an entire population when they are not in a condition of known need or distress. The goal of primary prevention is to reduce potentially harmful circumstances before they have a chance to create difficulties, and to reduce the incidence of disorders. (Dalton, Elias, & Wandersman, 2001). Examples of primary prevention efforts are vaccinations and nutrition programs in schools. Secondary

prevention, on the other hand, refers to an intervention that is aimed towards individuals or groups who are already showing signs of a disorder or difficulty. An example of a secondary prevention effort is providing specialized classes or tutoring for children who have been identified as being at risk of experiencing academic difficulties (Dalton, Elias, & Wandersman, 2001). Examining how prevention of heart disease is portrayed in magazines will give an indication of how this aspect of health promotion is depicted in the media.

A list of five research questions guided the data analysis in the current project. I examined these questions using the process of content analysis. Content analysis has been broadly defined as "any technique for making inferences by systematically and objectively identifying special characteristic of messages" (Holsti, 1968, p. 14). Said differently, Asa Berger (1998) describes content analysis as a means of trying to learn something about people by examining what they write, produce on television, or make movies about. In addition, he suggests that analyzing media is an indirect way of making inferences about the people who consume the media, assuming that what people read and watch are reflections of their values, attitudes, and world understanding accordingly. My guiding research questions were:

1. What type (medical, lifestyle, social structural) of health information is being portrayed in the print media?
2. Are there victim-blaming implications in the portrayal of heart disease in the print media?

3. Are there differences in the type (medical, lifestyle, social structural) of health information being portrayed to different socio-economic communities via print media?
4. How is the concept of prevention of heart disease being presented in the print media?
5. Are there differences in the type (medical, lifestyle, socio structural) of health information being portrayed in different gender and age magazines?

Definition of Cardiovascular Disease

Throughout this project I use several different terms to refer to the same set of diseases. Cardiovascular diseases are defined as diseases and injuries of the cardiovascular system: the heart, the blood vessels of the heart, and the system of blood vessels (veins and arteries) throughout the body and within the brain (Heart and Stroke Foundation of Canada, 2002).

Cardiovascular disease includes both heart disease and stroke. Often times the print media use heart disease and cardiovascular disease synonymously, and I have often done the same in this project. While I have sometimes divided cardiovascular disease into heart disease and stroke, other times I have spoken more generally and used the term heart disease to refer to the diseases of the cardiovascular system.

Methods

Magazine Sampling and Sorting

To address my research interests, it was important to examine articles in magazines that are associated with different socio-economic groups as well as different ages and both genders. Determining the gender and often the age associated with different magazines was simpler than determining the associated SES. Classifying

magazines according to SES indicators proved to be very difficult. Initially, I sought information on the specific markets towards where magazines geared their materials. I expected to find that some magazines are intentionally geared toward populations making higher amounts of money than others and some magazines geared specifically towards populations of modest incomes. While these marketing strategies seem quite apparent to me, this information was not readily available for the purposes of this research, which meant that I had to find other ways of determining the SES associated with different magazines. Fortunately, most magazines provide information on the median income of their readers. These data provided me with a starting point for separating the magazines along SES divisions. Using the median income of readers, I was able to separate magazines into categories on the basis of the average income of the readers of each magazine. This information is available from two central sources that have conducted wide reaching readership surveys, one in Canada, the Print Measurement Bureau (PMB), and one in the USA, the Mediamark Research Inc. group (MRI). To my knowledge, no other research study examining print media has used these sources of information.

The PMB and the MRI provide various demographic information including the gender, age, and average household income of the average reader of many popular magazines. The PMB is an annual survey of approximately 18,000 Canadians that examines a range of consumer patterns including magazine readership. The data are software controlled and are accessible at some academic institutions and for use by advertising businesses. The Mediamark Research Group conducts surveys based on interviews with more than 26,000 U.S. citizens and captures the demographic and lifestyle profiles of consumers of all forms of advertising media. This company is the

major US supplier of multimedia audience research. For the current research project, the relevant MRI information is accessible on the Internet. Between the PMB and the MRI there is information on almost 300 magazines available. In order to capture the most accurate picture of what Canadians are reading, only those magazines with relatively high circulation among the Canadian population were considered. A listing of magazine circulation figures for Canadian magazines is available through the PMB. The Canadian circulation figures for the American magazines were available through a publication called *Canadian Circulation of US Magazines* published by the ABC Publisher's Statements (ABC, 1999). The top 30 circulating magazines were the magazines to which I limited my focus.

It proved very difficult to separate the magazines according to SES. The challenge lay in the fact that the bulk of average readers' incomes of the magazines fell in a range that is considerably higher than one might consider to be "low" income. Statistics Canada annually calculates the low-income cut-offs (LICOs) for Canadian provinces and territories. These numbers approximate levels of gross income where people are forced to spend most of their income on basic needs such as food, shelter, and clothing (National Council of Welfare, 2002). The National Council of Welfare, the council that advises the Minister of Human Resources Development on the needs and problems of low-income Canadians, regards these LICOs as poverty lines. For 2001 the range of poverty lines for a couple with two children was from $30,214 (Prince Edward Island) to $35,471 (Quebec, Ontario, Manitoba, Alberta and British Columbia) (National Council of Welfare, 2002). Those families who receive welfare payments receive far less than this amount. For 2001 the range of welfare income for a couple with two children

was from $16,206 (New Brunswick) to $19,399 (Prince Edward Island) (National Council of Welfare, 2002). These figures are far lower than the incomes of the average readers of any of the magazines considered for this study. Implications of this difference will be discussed later.

The process of separating the magazines into SES groups involved several phases and trials. First, I chose the U.S. magazines with the top circulation in Canada (30). The range of household median income for these magazines was US$36,240 (*Ebony*) to US$76,399 (*Golf Digest*). The median incomes for the magazines were considerably higher than the poverty lines mentioned above. Initially, I divided these magazines into low, medium, and high groups based on the average income of the readers. I was hoping to have three clear groups with approximate distribution across income levels. In reality, the magazines tended to cluster in the middle to high ranges of income, reflecting a picture of magazine readership as clearly associated with the middle to high income earners. I also tried to impose my own categories of income breakdown on to the data by assigning the low group as US$0-US$45,555, the medium group as US$45,000-US60,000 and the high group at US$60,000+. But the resulting distribution of magazines was not useful either, as a large majority of the magazines fell into the middle range. Eventually I decided to use two categories: a) low (US$0 – US$49,000) and b) high (US$49,001+). The range for the low group is quite wide and includes magazines that some people would question as belonging to a lower income group, but it was necessary for me to include them in order to keep a varied sample of magazines in my sample.

The selection process was similar for the Canadian magazines. The range of median income for the 55 highest circulating magazines was C$43,864 (*Good Times*) to

C$82,380 (*Report on Business).* I attempted to use the same breakdown that I had tried for the American magazines (C$0-45,000, C$45,000-C$60,000 and C$60,000+) but the magazines were again heavily clustered in the middle and high ranges, leaving only one magazine in the low range. Eventually I grouped the magazines into two groups: a) under C$58000 and b) over C$60000. This process left out approximately 10 magazines from the middle income range which creates two groups that I felt were most distinct from one another.

The sample included a variety of magazines. I chose to keep the variety of magazines even though I suspected that several of them would likely not address heart disease to the same extent as other magazines might. For example, no articles appeared on CVD in the three years that I looked at in *Outdoor Canada* or *American Legion.* I included 29 magazines in the high group and 19 in the low group (see Appendix A for a complete listing of these magazines). After I had sampled the articles from these magazines, the number of magazines that actually carried articles on heart disease in the lower group was 9 and from the higher group was 14 (see Table 1 and Table 2).

High Income Magazines	Median Income US$	Median Age	Gender	Lower Income Magazines	Median Income US$	Median Age	Gender
Better Homes and Gardens	53692	44	Female	Ebony	36240	39	Female
Glamour	54172	32	Female	Essence	38688	35	Female
Golf Digest	76399	45	Male	Family Circle	46834	48	Female
Good Housekeeping	51447	47	Female	First For Women	48811	40	Female
Men's Health	59271	35	Male	Woman's Day	47516	46	Female
Muscle and Fitness	56829	31	Male	New Choices	NA	seniors	NA
Newsweek	64834	45	Neutral				
People	58587	40	Female				
Popular Science	58014	43	Male				
Prevention	51772	51	Female				
Sports Illustrated	56881	37	Male				

Table 1: American high and lower income magazines included in analyzed sample.
Note: NA refers to information that was not available.

High Income Magazines	Median Income CDN$	Median Age	Gender	Lower Income Magazines	Median Income CDN$	Median Age	Gender
Canadian Business	77342	NA	Male	Good Times	43864	seniors	Female
Canadian Living	60631	43	Female	Reader's Digest	54729	48	Female
Homemakers Magazine	60282	45	Female	[a] Fifty-Five Plus	58475	seniors	Female
Maclean's	62832	41	Neutral				
Time	63249	40	Neutral				

Table 2: Canadian high and lower income magazines included in analyzed sample.
Note: [a] Median income was over the $58000 "cut off" but was included in order to increase the sample of articles from seniors magazines.
Note: NA refers to information that was not available.

Article Sampling

I decided to sample articles from three different years for purposes of analysis. These years were 1990, 1995 and 2000. By limiting my focus to these three years I was able to track any changes in the portrayal of heart disease that occurred during this ten year period plus include a large enough sample size. The selection of articles involved three steps. First, I searched several article index systems (Reader's Guide to Periodicals, Canadian Periodical Index and the Canadian Business and Current Affairs) to find all of the articles that were printed in the years of interest on heart disease and stroke. I was only interested in the articles that appeared in the selected magazines that were of interest to this study (high circulation, high SES and lower SES). Second, I made a list of all of the relevant articles in magazines that fell into the high SES group and a similar list for the articles that were from the low SES group. Third, I selected the articles from the lists. The lists for the low SES group for all three years were quite short and for this reason I chose to look at all of the articles in the low SES groups. For the high SES groups, I used a sampling strategy that is partly random and partly purposeful (purposeful random

sampling). Using a random component in the sampling substantially increases the credibility of the results (Patton, 1990). I systematized the lists of articles by grouping the articles by magazine. In all three years, there were some magazines that had many relevant articles and some magazines that had very few, and I wanted to ensure that there was representation from a variety of magazines. I chose to analyze every nth article on the list according to the total number articles that were on the list and the approximate number that I wished to select for analysis. For example, for the year 2000, there were approximately 27 articles in total in the lower SES group, where as there were about 90 in the high SES group. In order to have a somewhat balanced representation from both groups, I chose to look at every article in the lower SES group, and every third article in the high group. When selecting from magazines with only a few articles, I adjusted the random selection to make sure that at least one article from that magazine was included. This procedure allowed me to include articles from a variety of different magazines, which reach a variety of different audiences (i.e., men's and women's magazines; different ages; magazines geared to African Americans) but still maintain an element of random selection.

2000. There were 102 relevant articles that fall under the high SES group and 27 that fall under the lower SES group for the year 2000. In order to have a somewhat equal representation of the two income categories I sampled about 29 articles from the 91 in the high SES group. In the high group, there were some magazines that had a large sample of articles on CVD. These include *Time* which had about 15 articles and *Prevention* which had 35 articles. In the low SES group the highest number of articles came from *Reader's Digest.*

1995. There were 12 relevant articles in low SES group in 1995. There were about 44 articles in the high SES group. Of these 44 articles I sampled 20 articles. The highest number of articles in the high SES group came from *Prevention,* and the highest number in the low SES group came from *Reader's Digest.*

1990. There were only 4 relevant articles in the low SES group in 1990, while there were about 27 articles in the high SES group. Of these 27 articles I sampled 15, most of which came from *Prevention.* The 4 articles in the low-income group were from 4 different magazines.

Data Analysis

Quantitative

The quantitative component of the study involved analyzing each paragraph in every article and determining whether or not each paragraph was related to lifestyle, medical, or socio-structural content. I then calculated the percentage of lifestyle, medical, or socio-structural paragraphs that were addressed by each article. I also calculated some simple frequency data. I analyzed the information with SPSS software to determine what the general focus of articles on CVD tend to be in each year, and overall. In this analysis, I examined the manifest content, those elements that are physically present and countable (Berg, 1998). I was basing my analysis on what themes were overtly present in the article.

Distinguishing between lifestyle, medical, and socio-structural information in articles was sometimes difficult, so I will briefly describe how I defined these terms for the purpose of coding these articles.

1. Medical:

Anything to do with the physiological aspects of the disease; description of symptoms; medications and medical tests; a person's medical history; most descriptions of the medical system; medical aspects of lifestyle components (i.e., descriptions of increased cholesterol levels due to consumption of high fat diet).

2. Lifestyle:

Aspects related to individual behaviour and daily living: diet, exercise, smoking, stress; some relationship information; information relating to cognition and emotions surrounding heart disease and stroke.

3. Socio-structural:

Information related to race, gender, age; bias in medical system; discussions on awareness raising; differences between nations (i.e., diet, disease incidences); discussions on societal perceptions of disease and diet; political or economic references.

Qualitative

Coding

I started examining the articles inductively. With only a handful of broad research questions in mind, I knew that I wanted to compare the numbers of articles that focused on lifestyle, medical, and socio-structural perspectives on CVD, but beyond that I was less sure of where my analysis would take me. Initially, I did not want to impose too much structure on my reading and coding of the materials. I wanted to keep an open mind as to the themes or categories that would emerge. Later, my analysis shifted to a more deductive approach as I started noticing major themes and started looking for specific elements in the articles. Patton (1990) described inductive and deductive

research as existing on a continuum. Often in qualitative research, as inquiry begins, the researcher's orientation tends to shift from inductive to more deductive as the inquiry begins to reveal patterns and major dimensions of interest that guide the researcher's focus (Patton, 1990).

After reading approximately 15 articles I created a coding scheme, based on my reading, that guided my reading and analysis more carefully (see Appendix B). The coding scheme included the following categories: prevention of heart disease and stroke, victim blaming elements, risk, gender portrayed, age portrayed, celebrity status, statistics, credentials of people cited in the articles, the use of narrative or storytelling format by the author, how language was used to convey meaning, as well as lifestyle, medical and socio-structural information.

After I had coded all of the data, I entered the quantitative portion of data into SPSS and the qualitative data into Microsoft Access. In SPSS I ran some descriptive statistics, frequencies, and Analyses of Variance with the dependent variable as perspective (lifestyle, medical, and socio-structural). The Access program allowed me to store large amounts of qualitative data analyzed by variable, and to run summary-data reports on the basis of my choice of variable or variables.

Quality of Data

In order to ensure that the analysis that I conducted was thorough and accurate, I discussed each step of the research closely with my advisor. During the sampling of magazines and articles, this direction was very helpful, as the process was perplexing at times because of the various attempts that I made at determining the SES associated with the magazines. For example, the PMB source provided information on Canadian

magazine readers' educational background, occupation, and home ownership status, all good indicators of SES. However, this information was not available for the American magazines. So I decided to stick with the median income of readers, as this information was readily available.

Credibility

I believe that working with an experienced content analyst enhanced the credibility of the researcher and the data. The trustworthiness of qualitative inquiry is largely dependent on the credibility of the researcher, as the researcher is at the centre of the data collection and the analytic process (Patton, 1990). Before starting this project I was relatively inexperienced in the area of content analysis. Thus, in circumstances where there was confusion or ambiguity surrounding an article's theme or message I consulted with my advisor until we felt certain that the most appropriate resolution had been reached.

In addition, I presented some preliminary findings for this project in poster format at the *Quebec-Ontario Community Psychology Conference* in Ottawa on May 2nd-4th 2002. The opportunity to discuss my preliminary results and methodology with other academics was a positive way of reinforcing the topic and the methodology.

Inter-rater Reliability

A graduate student in the psychology department at Wilfrid Laurier read and analyzed approximately 15% of the articles in order to establish a sense of inter-rater reliability. This student has extensive knowledge in both quantitative and qualitative data analysis. Having more than one researcher involved helps to reduce the potential bias that exists when a single person is responsible for all of the data collection (Patton, 1990)

and thus increases reliability of the analysis process. Separate reliability analyses were run for each of the medical, lifestyle, and socio-structural content areas comparing the two raters' analyses. For all three of these areas, there was significant agreement between the two raters: lifestyle, $r = 0.92$, $p<0.01$, medical, $r = 0.85$, $p<0.01$, and socio-structural, $r = 0.76$, $p<0.01$ content areas (see Appendix C).

Findings

In the following section, I will outline the quantitative and qualitative findings of this study. After a brief description of the sample of articles that were analyzed, I will discuss the results of two statistical analyses of variances that were run on the data. For both of these analyses, the dependent variable was the proportion of lifestyle, medical, and socio-structural content across year and SES (first analysis), and across age and gender (second analysis). The section on qualitative findings presents major themes associated with manifest and latent lifestyle content, manifest and latent medical content, socio-structural content, prevention, risk, year to year trends, SES, gender, and age.

Quantitative Findings

The quantitative portion of the analysis is largely based on analyzing each article for its proportion of lifestyle, medical and socio-structural content. For each article, there are three proportions calculated: one representing the proportion of medical content, one representing the proportion of lifestyle content, and one proportion representing the amount of socio-structural content. For example, the article, "Silent and deadly," the proportion of medical information is .86, the proportion of lifestyle information is .14 and the proportion of socio-structural information is 0.

Description of Sample

The total sample of articles in this study was 104. This sample included 55 articles from the year 2000, 30 articles from 1995, and 19 articles from 1990. For the sample grouped according to age, gender and age, see Tables 3, 4, and 5.

Age Associated with Magazine	Number of Articles in Sample
Young-Middle age (30-39)	9
Middle age (40-55)	84
Seniors	11
Total articles	104

Table 3: Number of articles in magazines associated with different age groups.

Gender Associated with Magazine	Number of Articles
Women's	72
Men's	22
Gender neutral*	10
Total articles	104

Table 4: Number of articles in magazines associated with the different genders
Note: * Gender information not available for magazine, or magazine is read equally by males and females. No gender comparisons made for this data.

SES Associated with Magazines	Number of Articles
High	62
Lower	42
Total articles	104

Table 5: Number of articles in magazines associated with different SES groups

Analysis of SES, Year, and Perspective

I ran a 2 (SES: high and low) x 3 (year: 1990, 1995, 2000) x 3 (perspective: lifestyle, medical and socio-structural) mixed-model analysis of variance (ANOVA) on

the data. The dependent variable that I was interested in was the portrayal of perspective of heart disease (lifestyle, medical, and socio-structural). There was no significant three way interaction among SES, year, and perspective F (4, 196) = 1.85, p>0.05. There was no significant difference between the high and lower SES magazines, or between the three years in their portrayal of lifestyle, medical, and socio-structural aspects of heart disease. In other words, a similar pattern of portrayal of heart disease existed across both SES groups, and across all years.

In these data, there was a main effect of perspective, F (2, 196) = 40.23, p<0.05. Analysis of the data revealed that there were significantly more aspects of articles on medical components and lifestyle components of the disease than socio-structural aspects. Overall, using paired sample t-tests, I found that the proportion of medical content (0.60) was higher than the proportion of lifestyle content (0.33), t (103) = 4.58, p < 0.01, which in turn was higher than the socio-structural content (0.63), t (103) = 7.18, p < 0.01 (see Figure 1).

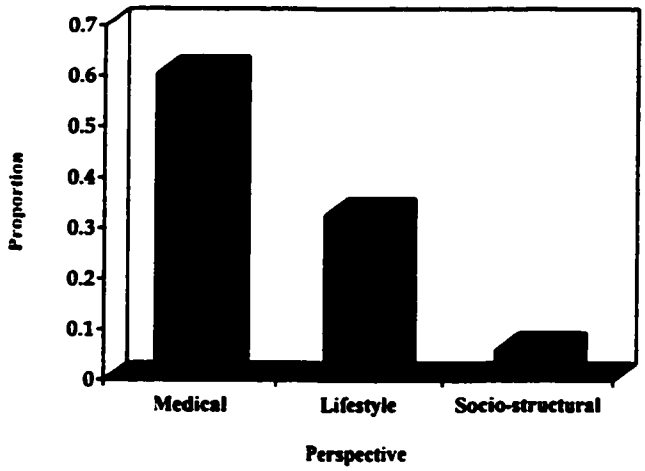

Figure 1: Proportion of lifestyle, medical and socio-structural aspect of heart disease portrayed in magazine articles in 1990, 1995, and 2000.

There were no significant differences in the content of the articles between the high and lower SES groups with respect to proportion of lifestyle, medical and socio-structural content, $F(1, 98) = 0.51, p > 0.05$. Overall, the articles in the magazines associated with the high SES group portrayed similar information on heart disease as the magazines associated with the lower SES group (see Figure 2).

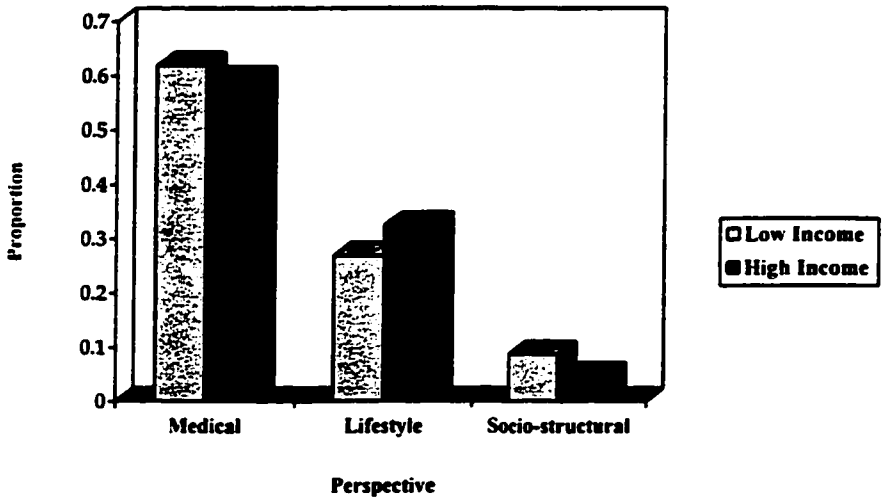

Figure 2: Proportion of lifestyle, medical and socio-structural aspects of heart disease in articles found in magazines associated with high and lower income groups.

In addition, there was no main effect of Year, $F(2, 98) = 0.50, p > 0.05$. Overall, between the years 1990, 1995 and 2000, there were no significant differences in the portrayal of lifestyle, medical, and socio-structural content in the articles included in this study.

Analysis of Age, Gender, and Perspective

I also ran a 3 (age: young-middle, middle, seniors) x 2 (gender of magazine: men's, women's) x 3 (perspective: medical, lifestyle, socio-structural) mixed model ANOVA on the data, again using perspective as the dependent variable. There was no three way interaction between these variables, $F(4, 176) = 1.55, p > 0.05$. Overall, there were no major differences between men's and women's magazines or the different age magazines in their portrayal of lifestyle, medical, and socio-structural content of heart disease.

Similar to the data on year and SES, there was a main effect of perspective, $F(2, 176) = 14.15, p < 0.01$. Paired samples t-tests showed that the proportion of medical content (0.60) was higher than the proportion of lifestyle content (0.33), $t(103) = 4.0, p < 0.001$, which in turn was higher than the socio-structural content (0.06), $t(103) = 4.7, p < 0.01$.

There was no main effect of age, $F(2, 88) = 0.48, p > 0.05$. Overall, between the three different age magazine groups (young-middle, middle, and seniors) there were no significant differences in the portrayal of lifestyle, medical, and socio-structural content in the articles included in this study.

There was also no main effect of gender, $F(2, 88) = 0.85, p > 0.05$. Overall, there were no significant differences between the articles from the women's magazines, men's magazines, and those magazines that were more gender neutral in their portrayal of lifestyle, medical and socio-structural content.

Upon examination of the results of this analysis of gender, age, and perspective, it became clear to me that there were some confounding problems in the data set because of

small sample sizes. The main problem was due to the fact that the bulk of the seniors articles (10 out of 11) were from women's magazines, leaving only one article from the sample of men's magazines. This small sample posed a problem because this one article in the seniors group under men's magazines affected the degrees of freedom since a variance cannot be calculated on the basis of a sample of one. Therefore, I decided to re-run the analysis without the seniors articles in order to investigate the effect of this uneven distribution of the sampled articles.

The results of this re-examination showed that the three-way interaction between gender of magazines (men's, women's) x age (middle-young, middle) x perspective (medical, lifestyle, socio-structural) was still not significant, $F(2, 158) = 0.70, p > 0.05$.

Qualitative Findings

Manifest Lifestyle Content

Most of the articles in this sample considered heart disease as an illness that is associated with lifestyle factors. According to many of the articles, it is possible to reduce one's risk of this disease through a variety of changes in the way one eats, drinks, exercises, and deals with stress and daily life. The articles generally presented this disease as preventable through changes in lifestyle factors. These methods of prevention were portrayed as simple and effective and were often linked to recent research studies or endorsements by experts, which was presented as providing evidence of their effectiveness. Below are the major lifestyle theme areas that the articles in this sample focused on.

a) It's All in the Food

Many articles focused on elements of diet as being important to the health of one's heart. This focus included increasing the intake of fruits and vegetables, reducing intake of red meat and fat, weight loss, increasing fiber, choosing certain cooking oils over other oils, eating more nuts and nut oils, increasing folic acid, and increasing consumption of certain types of fish. Improving one's diet was portrayed as being an easy and effective way of preventing heart attacks or reducing the risk of developing heart disease. The articles in this sample were full of examples of diet related messages. Examples of these messages include the following quotations. In the article, "Eat smart: Never too early, never too late," the author writes about using diet as a purposeful strategy to prevent heart disease:

> *...armed with a new set of knowledge tools, individuals can target specific nutritional strategies to combat heart disease before it strikes.* (p. 20)

The author of this article talks at length about these specific diet strategies. For example:

> *Folate, found in dark green leafy vegetables, as well as many fortified foods, may reduce harmful homocysteine levels. Homocysteine is an amino acid that researchers feel may be responsible for contributing to the development of heart disease.* (p. 24)

In the article, "We love fish," the author states:

> *For the first time, the American Heart Association has recommended that everyone eat two 3oz. servings of fatty fish a week.* (p. 50)

Also, in the article, "Going for the French factor," the author discusses the various types of foods that contain flavonoids, a compound thought to reduce the risk of heart disease:

> *If you think a bottle of red Burgundy is your only route to flavonoids, put away your corkscrew and read on. Fortunately, this extended family of compounds comes in almost*

> *all fruits and vegetables. (Wine, after all, starts out as fruit.) So the more produce you eat, the more flavonoids you get. The French, by the way, have a lusty appetite for fruits and veggies, another factor thought to protect their hearts.* (p. 76)

Additionally, in the article "Protect your heart with peanut butter – really!" the author outlines research that indicates that including peanut butter in one's diet may reduce the risk of heart disease:

> *In a 4-week study, 22 students spent 2 weeks each on a low fat AHA [American Heart Association] diet, then 2 weeks on a diet based on peanuts and peanut butter....Both the peanut and the AHA diets lowered total "bad" LDL cholesterol equally. But the peanut diet also lowered triglycerides, another heart disease factor by 13%, while the AHA diet raised them by 11%. And peanuts left "good" HDL cholesterol intact, while the AHA diet lowered it by 4%.* (p. 58)

As these examples illustrate, diet related information in articles on heart disease and stroke is full of advice, physiological information and research evidence that associates heart disease with what people consume.

b) Head to the Gym

Increasing the amount of exercise in a person's life was also portrayed as an important way of preventing heart disease. This focus was usually linked to efforts at reducing blood pressure or cholesterol in the blood or weight loss. Many articles simply listed exercise as one of the ways to reduce risk factors for heart disease. Other articles focused more specifically on physical activity. For example, in the article, "Move away from heart attack," the author states:

> *Regular exercise may help dissolve the threat of heart attack – literally. When blood clots form inside vessels already caked with fatty deposits, they can choke off blood flow,*

> *causing a heart attack. Now, researchers...find that exercise training raises the activity of a clot dissolving substance produced by blood vessels.* (p. 12)

Another example is found in the article, "24 Day program to stop a heart attack," states:

> *Move! Studies show that exercise reduces the risk of a heart attack by up to 50% - more than the best cholesterol-lowering drug can accomplish. And it doesn't take much: just a few hours a week, according to research...Pick an easy exercise such as walking, and begin to integrate two or three 15-minute workout intervals into your day.* (p. 125).

Increasing physical exercise as well as overall becoming more active in one's life were common messages in these articles. In the article "Choose to move," the author lists ways to incorporate more activity into one's life:

> *Activate your life. Don't "drive-thru;" park far away; take the stairs; after lunch, walk; bike to the store; hide the remote; go out and play.* (p. 26)

c) No Butts About It

Smoking cessation was strongly encouraged by many articles as an effective way of reducing the risk of heart disease. The medical link between smoking and heart disease as well as other illnesses such as lung cancer was a common point of interest. The article, "Second hand smoke: Grim news," presented various research studies showing the harmful effects of second hand smoke on adults and children. For example:

> *Indeed, Glantz calculates that passive smoking causes 10 times as much heart disease as lung disease, making it the nation's third leading cause of preventable death. The only bigger killers, he says, are active smoking and alcohol abuse.* (p. 59)

Another example is in the article, "Ensuring a healthy heart," which states:

> *A new study from New Zealand found smoking not only increases the risk of stroke six times, living with a smoker doubles the risk of stroke...(p. 18)*

Many other articles mentioned smoking cessation as one step toward reducing risk of heart disease and stroke. In the article, "Lower your blood pressure and live longer," the author states:

> *There is some evidence that heavy smoking leads to sustained rises in blood pressure. But even if you have smoked up to two or three packs a day for 20 years, you can help reduce your risk of sudden death from a heart attack within a year or two after stopping smoking – almost to the level of someone who has never smoked.* (p. 107-108)

Also, in the article, "Is your heart healthy?" the author presented a nine-question quiz to assess the reader's risk factors, which was followed by a list of methods to reduce risk factors and improve health. The first method for risk reduction and health improvement was smoking cessation:

> *Whether or not you score high, take these steps to improve your health – and even save your life.* ***No butts about it.*** *[*Bold emphasis is part of article*]. If you smoke, commit to quit today. Ask your physician about smoking-cessation programs and products.* (p. 36)

Clearly, according to the articles in this sample, smoking is very much associated with heart disease and quitting smoking is one way to reduce its risk.

d) Lifestyle Reduced

Twenty three of the articles (22%) discussed lifestyle elements in isolation from other aspects of a healthy lifestyle. These articles focused on one lifestyle element entirely, often elevating its importance. For example, focusing on one aspect of diet (i.e., benefits of including peanut butter or red wine in diet) without consideration of other elements of diet or lifestyle was a common trait for some of the lifestyle articles. These articles were often reporting specific research studies, which had discovered an interesting link between a particular lifestyle element and heart disease. For example, in

the article "Tap the Power of Extra Virgin Olive Oil," the author describes the benefits of extra virgin olive oil on men's cholesterol based on results of a research study in Spain. Before outlining the results of the study, the author says:

> *It looks like it pays to spend the extra money for extra virgin (unrefined) olive oil.* (p. 27)

In another article, "Get fresh and reduce stroke" the author says:

> *As summer approaches and fresh produce flourishes, eating plenty of fruit and vegetables gets easier and tastier. And it may also protect you from stroke. A study published in The Journal of The American Medical Association suggests that five to six daily servings of vegetables, fruit or citrus juices can reduce your risk of stroke.* (p. 27)

Also, in the article "Not too Late for Folate", the author focuses entirely on folate in the diet:

> *Inside some of those adult cereals you've been eating might be Captain Mystic himself. Cereals that are fortified with folate (as well as other foods that contain this nutrient) may have the magic power to spare you from stroke, according to new research.* (p. 28)

Additionally, in the article "Comeback time for coffee" the author focuses exclusively on research studies on the effects of coffee drinking on health:

> *The finding: these coffee drinkers were no more susceptible to strokes or heart attacks than anybody else. The results could ease the minds of the 100 million or so Americans who drink an average of 3.5 cups a day.* (p. 59)

These examples illustrate the tendency for articles to examine lifestyle components in isolation from one another. These articles were generally reporting on new research that had found the benefits of these components. While these research factors may be legitimate, these 23 articles chose to focus exclusively on these components and thus failed to discuss other aspects of lifestyle or the disease that may be relevant. Making

one small change in a person's diet is not likely to be as effective as making several major changes.

e) Pulling it all Together

Other articles, however, did make mention of the importance of addressing several aspects of one's lifestyle and making improvements in diet, activity level, stopping smoking as well as taking medical precautions such as regular testing of blood cholesterol levels. Many articles briefly listed the lifestyle and medical risk factors as well as different ways that readers can reduce their risk of heart disease. For example, in the article, "Hormones and your heart," the author states:

> *Poor cholesterol profile, high blood pressure, smoking (even one cigarette a day), diabetes, waist-hip ratio greater than 0.80, abnormal EKG, sedentary lifestyle or a family history of heart disease are all significant risk factors.* (p. 71)

Also, in the article, "War on fat," the author talks about addressing several aspects of one's lifestyle:

> *Much of the news on low-fat foods is heartening, if sometimes confusing. There is an abundance of advice, but most of it boils downs to this: a balanced approach that includes more emphasis on regular exercise, finding ways to lower everyday stress, and a slow but steady shift in dietary habits. It is unwise to adopt extreme measures such as banning certain foods, experts warn.* (p. 47)

This holistic portrayal is illustrated particularly well by several articles that appeared in 1990, which reported on a new "heart-disease-reversal" program advocated by Dr. Ornish. In one of these articles, "Reverse heart disease naturally," the author describes the program as:

> *a completely new way of life, including moderate exercise, a very low-fat vegetarian diet, yoga, and other stress reducing practices along with biweekly group therapy....With these patients as evidence Dr. Ornish's research suggests that diet and behavior changes can significantly reverse coronary blockages in just one year. His work is helping to change the way we think about heart disease....* (p. 51)

Also, in the article, "In his words," Dr. Ornish states:

> *If you can change those lifestyle factors that caused the problems to your heart in the first place, you can often show improvement very quickly. That's where our plan comes in. It involves a low-fat, vegetarian diet. It also includes an hour three times a week of moderate exercise – walking is sufficient for most people – and hour a day of stress management techniques. And the people who smoke need to stop.* (p. 123)

In the article, "24 Day program to stop a heart attack," the author describes 24 different ways of making lifestyle changes that are effective in reducing risk of heart disease. These areas of change included a variety of holistic aspects such as diet, activity level, relationships, medical regimes and others. The author of this article states:

> *She* [individual with heart disease] *had slashed her risk of a heart attack in half. How? By taking advantage of a unique approach developed at the Duke University Center for Integrative Medicine, an approach that combines the tools of American cardiology with natural remedies that include everything from green tea and exercise to dietary supplements and prayer. The best part: It's so simple that you and you doctor can easily tailor it to your needs and cut your risk of a heart attack by up to 60% - something that no drug or surgery can match!* (p. 122)

Latent Lifestyle Content

While there is an abundant amount of lifestyle content in these articles that is very apparent, it is also interesting to examine the latent aspects of lifestyle. Underlying all of

the rhetoric around low-fat diets, exercise regimes, and stress management, there are some subtleties that emerge through the pages in the way that the articles are written, the language used, and the chosen focus of each article. As with most magazine articles, the content of each article was usually written in a way as to appeal to the reader. Sometimes, authors used narratives, or real-life stories, to convey the message of lifestyle change or dramatic wording (which will be discussed further under the *Medical* section).

a) Individualized Responsibility

The lifestyle content of the articles was usually presented in a very individualistic manner. The articles addressed the lifestyle of the individual reader, encouraging him or her to change habits and lifestyle components in order to protect the self against impending heart disease. The message is clear: Your health is in your hands. There is a subtle message in the articles that has the potential to bring about feelings of guilt in the readers, if their lifestyles do not meet the "healthy standard" that the article is portraying. This tendency contributes to a sense of individualized responsibility for the incidence of heart disease. The responsibility for both the cause and the prevention of the disease falls squarely on the shoulders of the individual. An example of this subtle tendency to blame the victim is reflected in the article, "Taking it to heart," where a female doctor who developed heart disease reflects on her lifestyle:

> *Had I done all the wonderful things I had been telling my patients to do? I didn't smoke and I wasn't grossly overweight – although I was overweight. But I didn't have any rigorous control over my blood pressure. My diet wasn't perfect and my cholesterol wasn't as good as it should have been. And stress – I've been stressed all my life. I have not found being a woman physician in a man's world easy.* (p. 66)

In this quote, the doctor questions her lifestyle in a self-blaming manner, which portrays an inward, reproachful way of understanding the development of heart disease. All onus for the development of the disease was linked to the way that this woman lives her life. She talks about failing to exert "control" over her blood pressure, which implies the importance of maintaining control over one's health and lifestyle. In addition, the article presents this woman as an esteemed expert in the health field in the fact that she is Ottawa Hospital's chief of gynecology and director of reproductive endocrinology who has been awarded the Order of Canada. This presentation of a health role model and expert who immediately associates her personal lifestyle with heart disease, presents a picture of individual responsibility and conveys to the reader the way that they too should associate heart disease with their personal lifestyle factors.

Another example of subtle individualized responsibility is found in the article, "Is your heart healthy?" in which the author writes:

> *But enough of the bad news. Though heart disease is a leading cause of death for all Americans, it's a preventable disease...Look at every risk factor and see if you can't eliminate the factor naturally, then look at pharmaceutical treatment.* (p. 32)

Also, in the article "When you need cholesterol drugs," the author discusses ways to reduce cholesterol levels:

> *Shed excess pounds. Even a modest weight loss has proven to lower cholesterol. And trimming the fat around your abdomen is one sure way to protect yourself from heart disease. Change your diet. You can actually lower total cholesterol by as much as 40% though diet alone....Here's how...* (p. 114)

These two examples illustrate that by explaining how individuals can make changes in their lives to reduce the risk of heart disease, the articles are subtly placing the

responsibility for the disease onto the individual. A final example in this section is found in the article, "Healthy hearts for both of you," in which the author states:

> *The important message is that so much of heart disease in both men and women can be prevented by reducing risk factors. How long a heart keeps pumping has much to do with an individual's lifestyle choices. "We can prevent the majority of heart disease with the knowledge we have," Wielgosz says...Here are the important choices to consider.* ***Live smoke free...Eat well...Exercise regularly...*** (p. 36).

Sometimes, the individualized message in these articles was more overt than it was subtle. For example, in the following quote from the article, "Heart of the matter," the author clearly places the onus for the disease directly onto the lifestyle choices made by the individual:

> *You can work hard to change bad habits and choose to live, or sit back and indulge in unhealthy behaviour and increase your chances of becoming a statistic. It's that simple. To lessen your risk of cardiovascular disease, follow this advice: Don't smoke....(*p. 25)

Another example of overt individualized responsibility for heart disease is found in the article, "Have a healthier heart," in which the author states:

> *Heart disease is pretty much a self-inflicted ailment, and in spite of all our accumulated medical knowledge, it remains the biggest health enemy of both men and women...Of course, some risk factors can not be changed; genes, gender, and growing older are beyond anyone's command. But three of the big factors – hypertension, cholesterol level, and smoking – are largely within your control.* (p. 23)

These statements clearly place the onus of the disease on the individual. They all but blame individuals' lifestyles and choices for the development of heart disease, and almost denounce the individual who partakes in certain detrimental lifestyle habits with use of

terms like "indulge in unhealthy behaviours" and "self-inflicted ailment." Messages like these were apparent in all three years as well as across all types of magazines.

The sense of individualized responsibility in the articles was especially obvious in discussions around the prevention of heart disease. Analysis of prevention is particularly important because of the clear presentation of lifestyle factors as being alterable in order to prevent heart disease. By being able to prevent the disease, the articles that focus on this element are suggesting that individuals can actually do something (i.e., make lifestyle changes) in order to curtail the risk. All of the previous examples in this section illustrate this point, but a final example is found in the article, "Are you a woman at risk?" in which the author states:

> *The latest findings make it clear that the best kind of prevention, either before or after a diagnosis of heart disease, is for women of all ages to care for themselves. More than ever, their heart health appears to depend on the lifestyle choices they make, including whether they exercise or smoke, how they eat, and even how they deal with anger and fight depression.* (p. 102)

Prevention is examined in further detail later in this section.

b) Empowerment?

Another type of subtle message that comes across through the lifestyle information is empowerment. Articles tended to present lifestyle data in a manner that encouraged the reader to make changes in the way that he or she lived his or her life. Similarly to the discussion above on individualized responsibility for the disease, the articles indicate that the reader is capable of dramatically reducing his or her risk of heart disease by following the simple task or tasks prescribed in the article. Thus, some articles attempted to empower readers to take control of their lives and their health by

altering lifestyle patterns. An example is seen in the article, "Walk to your heart's content," in which the author writes:

> *It's never too late...to change your eating habits. Studies cited in Mayo Clinic Health have shown that people who have already suffered a heart attack and who followed a Mediterranean diet reduced their risk of a second heart attack by up to 70%.* (p. 90)

This quote uses dramatic research findings on risk reduction to encourage the reader to change his or her eating habits. Another example of empowerment in these articles is seen in the article, "Knock out number three," which suggests that:

> *Inside two soda cans you may be able to fit enough artillery to knock down the third largest killer in the United States. You'd have to pour out the soda first. But the amount of broccoli, tomatoes and other cooked veggies that could fit in the empties...* (p. 5)

This quote may be construed as empowering because it speaks directly to the reader (by using the pronoun "you") and implies that the reader has an "artillery" readily available to them to prevent stroke. A final example of empowerment is seen in the article, "The heart disease prevention guide," in which that author states:

> *The good news is that you can dramatically reduce your chances of heart disease by leading a healthy lifestyle. In fact, a report from the Harvard Nurses' Health Study suggests that not smoking, maintaining a normal weight, consuming a healthy diet, exercising on a regular basis and drinking moderates of alcohol can reduce a woman's risk by about 80%. Read on for the latest information on how every woman can protect herself from her greatest health threat.* (p. 50)

This quote suggests that all women have the capacity to protect themselves from heart disease. The subtleties between individualized responsibility for the heart disease and

empowerment messages in the articles in this sample will be addressed in the discussion section of this paper.

c) The Expert Knows Best

A large majority of the articles cited experts, specialists, highly acclaimed research institutes, or journals to support the information presented in the articles. While these elements are manifest parts of the articles, because these credentials are clearly visible in the articles, the effect of their presence may have more latent implications. By citing the academic letters behind a researcher's or doctor's name or associating the information in the article with an acclaimed medical centre, the message in the articles is conveyed with an element of authority. This sense of authority bolsters the legitimacy of the information and helps the author to "sell" his or her point to the reader. Of course, the printing of research findings and discoveries, as well as the authors of these developments in the media, is one of the ways that research findings make their way to the public and can be a good way of disseminating research findings. However, the use of credentials to purposefully augment the information sometimes seems like a tactic to "sell" the information to the reader. The use of credentials in this sample was not only tied to lifestyle information, but was seen in articles that focused more on medical and socio-structural information as well. An example of an article that used an extensive assortment of credentials is the article, "Wonder drug," in which approximately 17 different doctors from different affiliations were cited on the wonders of the drug aspirin, including:

> *Said Dr. John Cairns, a cardiologist who is chairman of the department of medicine at McMaster University in Hamilton, Ont: "Aspirin really is a wonder drug."...As well, Dr. Mark Adams, an associated professor of rheumatology at the University of Calgary, said*

> *that U.S. studies have found...The researchers from Boston's Harvard University Medical School and Brigham and Woman's Hospital published the final results last July...In November, a research team from the University of Southern California School of Medicine reported...Still, Dr. Henry Mizgala, a professor of medicine at the University of British Columbia, says that he has been taking an ASA tablet every other day for the past three years...Studies at Yale University in New Haven, Conn., and at England's Oxford University have suggested that...* (p. 38-41)

The use of credentials to back up the information in an article is a subtle way of reinforcing the legitimacy of the message. Thus, by associating lifestyle as well as medical components of heart disease with authority-carrying groups or affiliations, authors are subtly assuring the readers of the correctness of the information. For the most part, the type of credentials that were cited were those of medical doctors, medical researchers and scientists, as well as medical professors.

Often times, articles would use medical research studies or scientists to support lifestyle oriented material. For example, in the article "Secondhand smoke: Some grim news," the author cites research studies that implicate tobacco smoke in a number of health problems:

> *The second new study, by San Francisco heart researcher Stanton Glantz, suggests that lung cancer is only the beginning of the problem. Indeed, Glantz calculates that passive smoking causes 10 times as much heart disease as lung disease, making it the nation's third leading cause of preventable death.* (p. 59)

Discussing lifestyle factors in relation to medical research in this manner was a common way of presenting and legitimizing lifestyle material.

Manifest Medical Content

Most of the articles in this sample included a medical component in them. Common reoccurring medical themes were innovative medical technology, medical research, or improved medical treatments related to heart disease. In addition, medically oriented discussions on symptoms of heart disease, family medical history, and the physiological basis of heart disease, heart attacks, and strokes were also common themes.

a) Innovative Medicine

Often an article would be entirely devoted to describing one type of medical innovation. How this new innovation or tool affects the current understanding or treatment of heart disease was usually detailed. For example, the introduction of a new, "clot-busting" medication called t-PA, which can prevent damage caused by stroke or a heart attack if administered within a given time frame, was the focus of five articles, all of which were from the year 2000. In the article, "Taming the stroke," the author writes:

> *Under review is not just a new drug, but a radically new way of dealing with stroke victims. Traditionally, Buchan says, stroke has been the "Humpty Dumpty" syndrome ("all the king's horses and all the king's men couldn't put Humpty together again")...But with the advent of t-PA, and the promise of other chemical and surgical interventions on the horizon, all that is changing.* (p. 60)

The advent of a new type of medical test to ascertain whether nor not a heart attack has occurred in a patient is another example of a medical innovation that was mentioned in articles in this sample. In the article, "Helping hearts faster," the author writes:

> *Your heart pounds as you hurry your spouse into the hospital. You think it's a heart attack, but the doctors tell you it will be eight hours before they're sure. This once-*

> *familiar scene may soon become obsolete. New research has uncovered a test that can diagnose heart attacks while there is still something to do about them.* (p. 46)

Articles that focus on innovative developments in the diagnosis and treatment of heart disease serve to inform readers about the latest advances as well as provide optimism around the capabilities of how the scientific community is able to deal with the disease.

b) Physiology and Symptoms of Heart Disease

Descriptions of the symptoms of heart disease and stroke were very common in the articles in this sample. This occurrence may be related to efforts at raising consciousness of the disease and informing people of what physical signs they need to be attentive to. An example of a physiological description associated with heart disease and stroke is in the article, "Fight against stroke," the author describes the anatomy of a stroke:

> *Just as someone has a heart attack because of loss of blood flow to the heart, a person suffers a stroke when the flow of blood to the brain is interrupted. Although the brain accounts for only 2 percent of body weight, its 100 billion nerve cells demand 70% of the body's oxygen and other nutrients.* (p. 47)

An example of a description of how the heart works is seen in the article, "Heart attack," where the author says:

> *The heart contracts and relaxes between 60 and 100 times a minute during rest. The contractions increase in frequency during exercise to increase blood flow to functioning muscles. The heart requires a continuous blood supply to provide it with oxygen and other nutrients. This supply comes no from the blood within the heart chambers, but from the coronary arteries which course over the surface of the heart.* (p. 21)

This article also provided descriptions of the hardening of the arteries leading to blood clots as well as diagrams and helpful hints to support the descriptions. Another example of a physiological description are found in the article, "Have a healthier heart," in which the author describes the function of cholesterol:

> *The waxy fatlike substance called cholesterol is a necessary component of good health and present in all of the body's tissues. Cholesterol insulates nerve fibers, serves as a building block for hormones, and helps form the outer surface of cells. Too much cholesterol in the blood, however, can lead to heart disease.* (p. 26)

An example of a general description of the signs and symptoms of stroke is found in the article, "Fight against stroke," in which the author lists the common symptoms of stroke:

> *Stroke's warning signs: Sudden numbness of weakness of face, arm, or leg, especially on one side of the body; Confusion, or trouble speaking or understanding; Trouble walking or loss of balance or coordination; Unexplained dizziness; Sudden trouble seeing in one or both eyes or onset of blurred or double vision...* (p. 48)

In a few articles, description of the symptoms was accompanied by statements or statistics indicating that many people are not aware of the symptoms of stroke or heart disease. This focus on ignorance concerning the disease is seen in the article, "Take this to heart," in which the author says:

> *Congestive heart failure (CHF) is one of the leading causes of death and hospitalization in adults over 65. Yet many older people don't know the warning signs. In a recent Gallup survey of 815 adults ages 50 and over, 54 percent couldn't identify the symptoms caused by the heart's ineffective pumping action...* (p. 76)

Also, in the article, "Women's diseases doctors miss most," a doctor is cited as saying:

> *"Unfortunately, physicians and women still don't perceive heart disease as being a female problem, and they may not recognize the symptoms," says Dr. Lorretta Daniel, a cardiologist at the Toronto Hospital...* (p. 68)

By focusing on the lack of knowledge on part of the public, these articles are encouraging people to be better informed about aspects of disease, and are thereby implicating people's ignorance in failing to identify the disease as being linked to occurrence of the disease.

c) Medical Aspects of Lifestyle

Many articles included descriptions of the medical or physiological components of lifestyle factors such as diet, smoking, and exercise. For example, several articles addressed how exercise, fatty diets, and smoking impact cholesterol levels in the blood. Many articles described in detail the differences between the types of cholesterol and how lifestyle changes affect each one differently. An example of a medical description of a lifestyle factor is found in the article "Have a healthier heart," in which the author talks about the effects of smoking on people's health:

> *Smoking contributes to damage of the coronary arteries, which impedes blood flow to the heart. It can also damage the lining of the arteries, most likely by contributing to the formation of plaque. The nicotine habit raises cholesterol levels as well and, by increasing the stickiness of blood platelets, makes clotting in the narrowed arteries more likely.* (p. 26)

Another example is found in the article, "Move away from heart attack," in which the author says:

> *Regular exercise may help dissolve the threat of heart attack – literally. When blood clots form inside vessels already caked with fatty deposits, they can choke off blood flow, causing a heart attack or stroke.* (p. 12)

While the importance of exercise, a lifestyle factor, was the main theme for this article overall, the author discussed the medical and physiological elements of the disease in detail. A final example of a medical description of a lifestyle factor is from the article, "We love fish," in which the author talks about how the oils found in certain types of fish are linked to heart health:

> *Omega-3 fatty acids belong to a group of compounds known loosely as polyunsaturated fats....These fats serve as the raw material for a whole host of essential structures in the body, from brain cells to molecules that regulated inflammation, blood pressure and blood clotting. Since our bodies cannot manufacture their own supply of omega-3s, we have to get them from the food we eat...Laboratory analyses showed that omega-3 fatty acids lower the risk of clots developing in the blood – a common trigger for a heart attack – while reducing the level of triglycerides, another fatty compound that has been linked to heart disease...* (p. 50-51)

As these examples show, the medicalization of lifestyle factors was a common theme in the articles included in this sample. In many instances, an article would be so focused on the medical aspects of a lifestyle factor that when I calculated the content of the article it would appear to be medically focused when in fact, overall, the article was actually addressing a lifestyle factor. The overlap between medical and lifestyle factors in the articles was very apparent. How this overlap may have affected the results of this study is addressed further in the limitations segment of the Discussion section of this project.

Medical Latent Content

a) Drama

The language surrounding medically oriented discussions on the disease had a tendency to be quite dramatic. This use of drama to illustrate medical aspects of stroke and heart disease serves to draw the reader's attention to this aspect of the disease. In "Have a healthier

heart," the author personifies hypertension or high blood pressure by stating:

> *Hypertension moves slowly, systematically, and insidiously to destroy the body without warning. All too often it goes undiagnosed and untreated, eventually wearing out large and small arteries...(*p. 23)

The article "Are you a woman at risk?" uses the phrase "near fatal- crisis" to describe a woman's health situation and also associates idealistic dreams with medicine:

> *"The dream that a simple pill or handful of medicines can prevent heart disease has come closer to reality recently."* (p. 102)

Dramatic statements like these reinforce the glorification of medicine by placing it on a pedestal or in class of its own. Several of the articles in this sample were written as narratives, telling the stories of people who had experienced heart disease. These narratives had a tendency to use dramatic scenarios or language to relay their message. For example, in "The living proof," the author tells a story about a professor who had a stroke but was saved by a dramatic medical procedure which was outlined in the article:

> *With time running out, [Dr.] Woo and neuroradiologist Dr. Robert Ernst took an aggressive step: Feeding the drug through a catheter inserted in Balogh's femorial artery, they injected the t-PA straight into the clot, a technique that had been tried on only 30 patients before – with mixed results.* (p. 98)

The telling of a medical procedure in this dramatic narrative format invites the reader into the story to experience the situation from the perspective of the people who were actually present.

b) Supernatural Connections

In addition, a number of articles made religious or supernatural references to medical aspects of this disease. It seems that authors of these articles used the connections between medical innovations and religious or supernatural sentiments to glorify the medical component of the article. For example, in the article, "Journey of the heart," a man who underwent a heart transplant after having a heart attack wrote:

> *I owe my life to a person I will never know....I've asked myself what the appropriate prayer might be for the repose of the soul of my dead benefactor. In the end it came down to the simple prayer of thanks I say each time for my donor and his family.* (p. 20)

In the article, "Pump it up" the author uses hope several times in relation to a new type of heart-assist device. The author says that often times, "their only hope for survival is a heart transplant" and "a new type of mechanical pump may offer hope" (p. 43). Another example of spiritual connections to heart disease is seen in the article, "Miracle of life." This article is about a woman who suffered a brain aneurysm who, before she died, decided she would like to donate her heart to her church pastor who was in need of a heart transplant. The article makes numerous religious references regarding the transplant procedure such as, "I believe that a miracle happened," and "his faith kept us going" (p. 81). The common connections between medical components of heart disease and spirituality in these articles is very interesting, as it draws the readers' attention to the medical component of the disease.

c) Simplified Reporting

Another interesting aspect of both the medical and the lifestyle information in the articles is the tendency towards simplification. By simplification, I mean that many articles had a tendency to simplify aspects of heart disease-related information. As already discussed in the lifestyle section above, articles tended to isolate elements of lifestyle and present these elements in ways that simplified the complexity of the disease. The presentation of oversimplified information was also an aspect of medically related articles. For example, an article from 2000, "Warning at the waist" suggests that men who are over a certain waist size as well as high levels of triglycerides (blood fat) have a high risk of developing heart disease. The author stated that:

> *Family physicians can easily identify men at risk for heart disease by measuring their patients' waists...* (p. 24)

This presentation of information is oversimplified because it focuses on an overt, physical characteristic that may or may not provide information on the health of a person's heart. Another example is in the article, "Time for a heart attack?" in which the author briefly reports on research that talks about the timing of heart attacks:

> *Dr. Stefan N. Willich, who along with other researcher determined that heart attacks tend to occur more often in the morning, now says that Monday mornings are the riskiest – at least among those who begin their work week then.* (p. 92)

While research such as that described above is very useful information for the understanding of heart disease, the simplified version that appears in the media does not do justice to the complex aspects of the disease as well as the research process. However, the media version is clear and to the point which is what grabs readers attention and informs readers quickly about the basic findings and implications.

Socio-structural Content

There was a relative lack of emphasis on the systemic, environmental and societal elements of heart disease in these articles. This paucity of data has important implications to the portrayal of this disease to society. While there were some major aspects of the disease that were not addressed at all, there were some segments of articles that touched on societal aspects of the disease. The socio-structural information that did appear dealt with the following factors.

Several articles compared the genders in the incidence and symptoms of heart disease (12/104 articles = 11.5%). The underdiagnosis or misdiagnosis of women's heart disease was also an area of discussion (11/104 articles = 10.6%). Comparisons between different races in the incidence of the disease was also discussed (8 /104 articles = 7.7%). For example, several articles addressed the fact that there are differences between Caucasians and African Americans in the incidence of heart disease and lifestyle behaviours, as well as rate of referrals for important medical tests. For example, in the article, "Heart disease and blacks," the author says:

> *Blacks are more at risk for developing diseases of the cardiovascular system because of such factors as hypertension, cigarette smoking, a fatty diet leading to high blood cholesterol levels, diabetes mellitus (which, either diagnosed or undiagnosed, is higher in Blacks than whites), obesity and physical fitness. Black females are usually not involved in leisure time physical fitness activities*...(p. 177)

Some articles also made comparisons in diet between different nations (7/104 articles = 6.7%). For example, several articles compared the diet and heart attack rates between the American and the French. This comparison was of interest because of the high fat content of both diets, but the differences in heart attack rates. This difference was partly

attributed to the higher consumption of red wine and fruits and vegetables by the French. Some articles addressed an increasing concern about heart disease due to the changing demographics of the population (i.e., increasing age of baby boomers) (4/104 articles = 3.9%). In addition, two articles (1.9%) addressed the gender and race bias that black women face in the medical system. For example, in the article, "Is your heart healthy?" the author states:

> *Black women also face gender and racial bias in the medical system. A study published last year in The New England Journal of Medicine reported that black women with cardiac symptoms were significantly less likely than White men and women – and Black men – to be referred for catheterization, a standard procedure for examining the heart.* (p. 32)

Two articles (1.9%) described a nation wide campaign to reduce the number of deaths from heart disease on golf courses. Another article discussed the lack of U.S. government regulations on food labeling. In the article, "Good food-picking seal," the author addressed the issue of nutritional food labeling:

> *The seal is the focus of an ambitious new nutrition-education effort by A.H.A. [American Heart Association]. But instead of winning universal applause for the program, the organization finds itself under fire from trade and consumer groups and even federal agencies, which charge that the project may add to shoppers' confusion.* (p. 80)

Another article discussed the link between heart disease and economic factors. In the article, "Heart disease and blacks" the author stated:

> *Heart disease and stroke are also responsible for more disability and economic loss than any other diseases and are the major causes of absence from work.* (p. 177)

Lastly, several articles discussed the importance of raising awareness and investing in health education efforts related to different aspects of the disease such as symptoms and preventative measures that can be taken such as improving lifestyle factors. While this list of socio-structural areas seems quite comprehensive, these factors usually only made up a very small portion of the article in which that they were included. Many of these factors are very important to the understanding of heart disease and stroke, and their inclusion in the articles in this sample is a sign that there is some recognition of societal and political factors of heart disease by the media. However, for the most part, these articles do little more than briefly address systemic components affiliated with the disease. Rarely do the authors suggest concrete societal changes that could help to address or change some of the factors that are mentioned.

Prevention

The prevention of heart disease is a major focus of the articles in this sample. Across magazines and years, prevention is most often presented in a very secondary sense. The articles in this sample often outlined prevention techniques for those individuals who had already begun to develop the disease, show symptoms, or who were at very high risk of developing the disease due to lifestyle and medical history factors. The focus was often limited to lifestyle changes or improvement and other times a combination of medical and lifestyle factors were the focus of suggested change. The lifestyle factors that were most mentioned in relation to prevention were smoking, diet, exercise, and stress. The articles urged readers to do what they could to lower their blood pressure and cholesterol, reduce their stress, and stop smoking. An example of the

secondary prevention focus is seen in the article, "State of the heart," which discusses prevention of heart disease in people who are already at high risk:

> *Doctors are still discussing which patients are good candidates for PET scans...Best bets: people at greatest risk for developing coronary heart disease – those who smoke, are obese, have high blood pressure, a high cholesterol level or diabetes. Advance knowledge could help them to adopt healthier lifestyle habits...* (p. 22)

As this example shows, the articles tended to focus on preventing heart disease in people who were already at high risk for developing it. In the article, "Healthy hearts for both of you" the author summarizes the message of prevention of heart disease by stating:

> *The important message is that so much of heart disease in both men and women can be prevented by reducing risk factors. How long a heart keeps pumping has much to do with an individual's lifestyle choices. "We can prevent the majority of heart disease with the knowledge we have." Wielgosz says.* (p. 35)

The medical factors that were most mentioned in relation to prevention, were taking aspirin and other medications regularly to lower the chances of blood clots, having surgery, and seeking medical attention through heart tests and regular doctor visits. In the article, "Stroke-prevention update," the author says:

> *Scientists supported by the U.S. National Institute of Health found surgery to be so effective I preventing strokes in patients with partially blocked neck arteries that a nation-wide study was cut short to announce results to physicians...The findings: Surgery cut stroke risk by 55 percent for patients with narrowed carotid arteries when compared with patients treated only with aspirin.* (p. 104)

Additionally, in the article, "Aspirin: Not only for your heart," doctors are cited praising the preventative benefits of aspirin:

> *...Dr. Charles Hennekens calls aspirin used under a physician's supervision "one of the greatest preventive and therapeutic bargains of all time."* (p. 34)

Because of the focus on medical and lifestyle oriented factors, the prevention of CVD was presented very individualistically, focusing on the habits and medical practices that people utilize in their lives and encouraging readers to change these habits for the sake of their health. In the 1995 article, "Time for a heart attack?" the author of a research study suggested that:

> *...[the current research result] could lead to finding ways to prevent heart attacks in high-risk individuals by designing drug therapies, for example, that provide extra protection.* (p. 92)

The articles did not discuss the prevention of CVD in a socio-structural sense. There was little mention of preventing heart disease by looking beyond the individualistic factors addressed by lifestyle and medical components. The closest that an article came was to mention the importance of increasing awareness about the disease as a means to prevent its development. These efforts included encouraging readers to know how to detect the symptoms of heart disease, and to have better understanding of the medical procedures that are involved in testing for CVD. In the article, "Taking it to heart," the author encouraged women to take control of their health for the sake of preventing heart disease and to overcome gender bias in the medical system:

> *Jolly is adamant that women take on their own health promotion and seek help. "Women need to push the agenda," she says. "They need to ask for second opinions. They have to be able to say to their doctors, 'I think this is heart disease."* (p. 67)

While this insistence to overcome gender bias can be empowering and effectively preventative, it still manages to reinforce the message that the individual is ultimately

responsible for his or her health. This article mentioned how bias impedes the detection and treatment of heart disease in women, a systemic problem in the medical system, but instead of directly addressing this bias, change was discussed in terms of raising the awareness of the individual.

Risk

Risk associated with heart disease and stroke was mentioned in some way in most of the articles. Often, this risk of disease was oversimplified. For example, sometimes an author of an article would cite a research study or studies that demonstrated how changing one certain lifestyle factor could dramatically reduce the risk of the disease. This simple focus on research findings was very common, as many articles reported on the potential positive components of one research study without addressing other components that are just as important. For example, several articles focused exclusively on flavonoids (compounds found in red wine and grape juice) and the potential effect that these compounds play on reducing cholesterol levels, without mentioning any other risk factor or aspect of the disease. Articles often focused their messages in a way that led the reader to believe that if they changed one small element of their lifestyle or medical regime that their chances of dying of heart disease would be *dramatically* reduced. For example, in the brief article, "Women and heart disease," the author reports on research that espouses the benefits of regular exercise:

> *One important finding is that regular exercise may reduce the risk of heart disease in women by up to 45 percent – as much as estrogen replacement (44%), and almost as much as quitting smoking (50-70%).* (p. 20)

This article is only one paragraph long and only vaguely described what an effective exercise regime would entail. Also in the article, "Walk to your heart's content," the author reports that:

> *...eating a bowl of cold breakfast cereal that supplies about five grams of fiber can cut your risk of heart disease by 37%.* (p. 90)

This statistic is presented in isolation of other dietary factors providing no contextual support or details on the type of cereal this statement refers to, or other dietary habits that are important in reducing risk of heart disease and stroke.

There were some articles, however, that did make an effort to focus on the importance of addressing the holistic components of risk associated with heart disease and stroke. For example, in 1990 several articles focused on Dr. Ornish and his dramatic lifestyle-changing regime that showed promising results. As already discussed in the Lifestyle section of this thesis, this program involved changes in diet, exercise, meditation, and social support, and stressed that it is vital that people change a variety of lifestyle aspects in order to reduce their risk of the disease. I deal with the concept of risk and its relation to the broader field of health promotion in the Discussion section.

Year to Year Trends

While, the quantitative analysis discovered no major differences between the portrayal of content across years in terms of medical, lifestyle, and socio-structural information, there were some minor differences in general content areas. Generally speaking, each year had an area of interest that appeared more frequently, in part, paralleling and perhaps reinforcing current research trends of the time period. For example, in 1990 there were more articles on a particular lifestyle-changing program by

Dr. Ornish than there were any other year (i.e., "Reverse heart disease naturally"). It was at this time that this doctor's program gained popularity. Similarly, in 1995, there were more articles than in the other years on the positive effect of flavonoids on blood cholesterol levels (i.e., "Going for the French factor"). It was at this time that research into this area became more popular. Also, in 2000 there were more articles on the benefits of "good" oils or Omega-3 oils in the diet, such as those found in fish, nuts and olive oil (i.e., "Tap the power of extra virgin oil"). So while the topic of articles appears to have changed slightly from year to year, the perspective in terms of lifestyle, medical or socio-structural content did not generally change.

Interestingly, as the years progressed, there were increasingly more articles on heart disease in the print media in general. For this sample, the criteria for article selection was somewhat stringent. I was only interested in examining articles from high circulating magazines that fell into the designated high or lower categories SES. Those magazines that fell in between the high and the lower SES groups on the basis of income were excluded (i.e., *Chatelaine* Magazine). Similarly, magazines that were not highly circulated were not included. Comparing the number of articles across the years that fit these particular criteria, there were approximately 35 articles in 1990, 56 articles in 1995, and 129 articles in 2000 on disease and stroke. While these numbers do not reflect the actual number of articles that appeared in the print media on heart disease in these years, they do represent a trend towards more coverage in recent years on heart disease and stroke in the magazines included in this study.

Another interesting difference between the three years was in the portrayal of women and heart disease. There were more articles from the year 2000 that focused

exclusively on heart disease in women than the other two years combined. According to information in the articles, the gender associations with heart disease changed slightly during the time period under examination. In the early 1990s, there was less emphasis on heart disease and women, and more emphasis on the disease in men. For example, in the 1990 article, "Fight cholesterol with exercise and low-fat diet," the author reported on the results of a research study that examined the effects of diet and exercise on men's and women's cholesterol levels:

> *"The men who dieted without any exercising had some success: they raised their HDL two percent. Results for the women were less clear, but women are generally at lower risk of heart disease."* (p. 228)

This notion about women being at lower risk for heart disease was not the general message that appeared in the articles in the later years. In the year 2000, there were nine articles included in this sample that dealt specifically with women and heart disease, whereas there were only two in 1990 and five in 1995. The message in later years was that heart disease is one of women's most common diseases. In the 1995 article, "Heart alert," the author says:

> *According to Statistics Canada, heart disease afflicts both sexes in roughly equal numbers – causing 41 percent of female deaths and 37 percent of male deaths in Canada in 1992, the most recent year for which the figures are available. But there are important gender differences in heart disease. Typically, men develop the disease in their 40s....But most women...maintain healthy hearts at least 10 to 15 years longer than men.* (p. 71)

Also, in the 2000 article, "The heart disease prevention guide," the author says:

> *One in five. That's not a breast cancer statistic. It's the number of women who have some form of cardiovascular disease – a condition that kills nearly twice as many women*

> *as all forms of cancer combined. Even more startling is the fact that many women who are at risk for heart disease don't even realize that they are.* (p. 50)

This shift in portrayal of women and heart disease may represent a trend toward more reporting by the print media about women and heart disease as well as a progression in the understanding in the medical community about how and when the disease affects women.

Socio-economic Status

As already reported, there were no significant quantitative differences between the different SES magazines. From my analysis there appear to be no major qualitative differences. However, one element of difference to note is the variation in the type of magazines that fell into each SES group. As noted in the methodology section, there were more magazines in the high SES group from which articles were sampled than the lower SES group. In general, people who make less household income purchase fewer magazines, which makes it difficult to compare the media portrayal of health between SES groups. The magazines from which I took lower SES articles included a general interest magazine (*Reader's Digest),* magazines geared toward African American Women (*Essence* and *Ebony*), women's magazines (*Family Circle, First For Women, Woman's Day)* and seniors magazines (*Good Times*). In general, the type of articles that appeared in these magazines did not seem to differ qualitatively from those magazines from which high SES articles were taken from, a sample which included more than double the number of magazines as the lower group (see Appendix A).

Gender

There were some interesting differences in the way that the articles portrayed the different genders. Subtle gender differences existed in the language used by the different articles as well as the actual presentation of women and men. In some cases, the articles would present the different genders very stereotypically in the language that they used. In some of these articles, language was used in a particular way that fit with traditional male and female roles and expectations. An example from a men's magazines included the article, "A drink to your health," in which the author asked the question,

> *So what you're saying is those after-work martinis aren't going to keep our arteries clear, huh?* (p. 33)

Another example is from the article, "Test your brain" in which the author states:

> *We always thought that strokes were an old man's problem, until we heard that roughly 25,000 men in their 30s and 40s suffer them every year. Frankly, we don't like the idea of spending the prime of our lives relearning how to walk, talk and program the VCR. We assume you don't either...*(p. 54)

These examples, which both appeared in men's magazines, use casual language and could be interpreted as representing men as being concerned about alcohol after a day's work, and television watching. Phrases such as these fit into traditional masculine stereotypes and may serve to perpetuate these understandings of the men.

Some articles tended to stereotype women's roles as well, and presented females as the caregivers in the household and the ones who are responsible for monitoring their husband's heart disease symptoms. One article, for example, described why women tend to be less aggressive in seeking treatment for their heart condition as being related to their role as the household caregiver:

> *Female patients often decline such treatment if it means an extended stay in hospital. They ask, "Who's going to look after my family, my husband, my house?"...Women should treat their symptoms the same way they treat their husbands' symptoms.* (p. 71)

Interestingly, one article, "The lady killer," criticized the traditional role of women as being too concerned with her husband's symptoms and not sensitive enough to her own symptoms. This article also pointed out several gender biases that exist in the medical system. However, after presenting research results that suggest that a third of women feel that their doctors talk down to them, the article finishes off with a paragraph that reverts back to perpetuating gender stereotypes:

> *Fight feeling intimidated by your physician's white coat and framed diploma. Your doctor is human. Like you or anybody else, he performs better when he's appreciated. A study done at Cornell University in Ithaca, N.Y., involving physicians who were given theoretical cases to solve, showed that those who received a gift of candy found the correct diagnoses earlier and had more humane attitude. Good communication may only be a bonbon away.* (p. 71)

Not only does this paragraph assume that physicians are male, but it implies that women should give a gift to their doctor in order to keep *him* happy and receive a correct diagnosis. The message here is that it is up to the woman to care for the concerns of others, particularly men, even those concerns of her doctor.

Other articles that dealt with women and heart disease were particularly sensitive to gender issues and seemed to be urging readers to overcome traditional gender associations. For example, in the article, "Taking it to heart" a female physician and also head of Ottawa Hospital's chief of gynecology and reproductive endocrinology, is

portrayed as a "medical suffragette" after she underwent surgery for her own heart disease. This woman is cited as saying:

> *Women need to push the agenda. They need to ask for second opinions. They have to be able to say to their doctors, 'I think this is heart disease.' They need to fight for consultation with a cardiologist. If that cardiologist doesn't listen, and they have risk factors...hello! The bells are ringing. They've got the ammunition and they need to use that ammunition to fight for awareness.* (p. 68)

This article, and others like it, strongly encouraged the reader to be more aware of the prevalence of heart disease in women and the need for women to speak up and take notice of their risk in order to receive appropriate treatment.

In another article, "Comeback time for coffee," the author acknowledged that medical research tends to be gender biased:

> *The school's investigators studies 45,589 men aged 40 to 75 years, some of whom averaged six or more cups of coffee daily. (As is too often the case in medical research, women were left out of the study.)* (p. 59)

By recognizing this gender bias in medical research, the media are drawing attention to aspects of the medical system that perpetuate discrimination and inequalities between the genders.

A final note on gender and heart disease that is worthy of mention is the fact that many articles compared women's heart disease with the prevalence of breast cancer. This is an interesting point because none of the articles in this sample compared men's rates of heart disease with prostate cancer or other forms of cancer. The articles that compared heart disease with breast cancer were usually attempting to show that its prevalence exceeds that of breast cancer, a finding which people often find surprising

because of the increasing awareness efforts around breast cancer. Because of the traditional association of heart disease as a man's disease, the authors of the articles likely felt that there was no need to compare its prevalence to other diseases.

Age

There were no major qualitative differences in the presentation of lifestyle, medical, and socio-structural content between the articles from magazines geared toward young-middle aged, middle aged and seniors magazines. These comparisons are difficult to make in this study because of the small number of articles in the young-middle aged and seniors' magazines. Not surprisingly, there were no articles on heart disease and stroke in magazines geared towards teens and young adults in the years 1990, 1995 and 2000. As presented in the quantitative portion of this section, there were few articles in this sample from magazines geared toward young-middle aged people as well as to seniors. This low number is partly due to the fact that in this study, I focused on high circulation magazines, and many of the seniors' magazines have fairly low circulation figures compared to magazines geared toward the middle aged population. All in all, the majority of articles on cardiovascular diseases are found in magazines that are geared toward the middle-aged population.

The actual *portrayal* of age in association with heart disease and stroke in the articles was heavily focused on middle-aged people or seniors. Approximately half of the articles did not actually focus on a specific age or even mention a specific age. For those articles that did mention an age in relation to heart disease and stroke, most articles focused on the age in which people are most at risk or developing the disease (middle

aged and seniors). For example, in the article, "Women and heart disease," the author states:

> *Because of the high incidence of heart disease in post-menopausal women (a Mayo Clinic study reveals that one in three women over 65 will develop heart problems), several major studies are underway to pinpoint causes and effective treatment.* (p. 20)

Also, in the article, "Three hours to save your life," the age of the individual whom the author describes is around the age where risk for heart disease is quite high:

> *On a Monday afternoon in October 1996, Jo Macleay, a mother of four, was upstairs in the bedroom of her home in Sherwood Park, Alta., when she heard strange mumbling noises coming from downstairs. Rushing into the kitchen, she found her 55-year-old husband, Doug, standing by the dishwasher, unable to speak or move his right arm and fingers.* (p. 97)

While the majority of the articles did focus on the middle-aged or seniors age range, there were some exceptions. A few of the articles focused on heart disease in people in their 30s and early 40s, and some even mentioned heart disease in relation to people in their 20s or adolescence. For the most part these "younger-focused" articles discussed the importance of leading a healthy lifestyle at an early age in order to offset the development of heart disease later in life. For example, in the article, "When you need cholesterol drugs," a young reader poses a question about her high cholesterol:

> *My doctor wants me to start taking cholesterol-lowering medication because of my high numbers. I'm only 24, but I'm 40 pounds overweight, and heart disease runs in my family. Do I really need medication?* (p. 114).

To this question, the author responds:

> *At your age, high cholesterol levels are most likely due to a hereditary condition called familial hyperlipidemia, which puts you at greater risk for premature coronary artery disease. So your doctor is right to be concerned about bringing your cholesterol down closer to normal*...(p. 114)

In another brief article, "Never too early," the author reports on research findings that associate hardening of the arteries with young adults:

> *Researchers conducting the Bogalusa Heart Study in Bogalusa, Louisiana have found that some young adults show signs of arterial hardening. If you're 20 or older and your cholesterol is higher than 200, you should lower your fat intake and increase exercise to reduce your risk of heart attack.* (p. 86).

The magazines that carried articles that discussed heart disease in relation to ages younger than middle-aged or seniors came from magazines in the young-middle or middle-aged categories (i.e., *People Weekly, Prevention, Newsweek* and *Men's Health*). In other words, none of the articles from seniors magazines carried information that addressed heart disease in younger people.

Discussion

The findings from this research study provide a picture of the way that cardiovascular disease and several of the health promotion aspects of this disease are portrayed across different types of high circulation magazines in Canada. The findings illustrate that the media largely focus on the medical and lifestyle elements of this disease, while they neglect the socio-structural aspects that are involved in the development and maintenance of the disease. This portrayal of cardiovascular disease has numerous implications for understanding the social meanings around heart disease as well as health promotion.

In the following sections, I will begin by identifying four underlying assumptions that were made by the authors of many of the articles in this sample. Following these assumptions, I will expand upon several aspects of the research findings regarding SES, gender, and age. After these sections I will discuss an important implication of the findings: the individualization of cardiovascular disease in the media, and victim blaming. I will also discuss the socio-structural factors of the disease that were addressed by the media as well as those factors that were neglected, and also prevention of heart disease in the media. Then, I will speculate on missing links between health research and the media, and how media may serve as agents of social control and maintain society's status quo. Finally, I will end the section with an overview of the limitations of the current research study, areas of future research, as well as a conclusion to the project.

Underlying Assumptions Made in the Articles

The authors of many of the articles tended to make some general assumptions about the reader and the world in the way that they represented information on heart disease. In regards to the lifestyle changes that the articles focused on, there was an underlying assumption that the reader is able to financially afford the changes being put forth. Some people cannot afford to purchase foods such as fresh produce or extra-virgin olive oil. Other people may not feel they are capable of increasing their level of exercise because they cannot afford to buy a gym membership or suitable attire. Authors suggesting that individuals who are at high-risk of developing heart disease should take a regular dose of aspirin are assuming that the reader is able to afford such items, which may be considered somewhat of a luxury for some people.

Another assumption made by the authors of the articles in this sample is that the reader has access to the suggested resources. For some people, simply making one's way to a grocery store to purchase fresh produce may pose challenges due to lack of transportation, physical or mental disabilities, isolated living conditions, or limited child care. Similarly, suggestions made by authors about having regular medical tests assume that all readers have adequate health insurance to pay for routine testing. Lack of health insurance is a problem that is more common in the United States than it is in Canada because of the structure of the Canadian health care system that ensures basic health coverage for all Canadians.

A third assumption made by the authors of the articles is that the reader is actually interested in improving his or her health or working to reduce their risk of heart disease. I believe that it is important for people to have positive self-esteem in order to want to make changes in their lives to try and prevent illness. By encouraging readers to take control of their health and wellness, the media are taking for granted that different people feel differently about themselves and their health, and may be at different stages of wanting to make lifestyle changes. For many people, allowing themselves a cigarette break twice a day is the only part of their day that they derive pleasure from, and the only part of the day that they can take for themselves. For these individuals, the idea of quitting smoking in order to lower their risk of potentially developing heart disease might seem unimportant.

A final assumption made by the authors of these articles is that the recommendations that they give fit with the social, cultural, and religious considerations of the reader. Different types of food, for example, are often associated with religious

holidays only. Some religions forbid the consumption of certain foods altogether. Also, some cultures may have ideas around exercise regimes or tobacco use that are different than what the media portray as the North American norm.

These four assumptions indicate that in most instances, magazines are geared toward people who are able to afford them. For the most part, these are people from middle to high socio-economic groups who have the resources to purchase the magazines as well as follow through with the suggestions made in the articles on heart disease. The people who were portrayed in the magazines were often from the middle or upper class. In the article "Reverse heart disease naturally," the individuals enrolled in the holistic, lifestyle-changing program were described as "businessmen, a minister, an engineer and a contractor." These are likely people who make more than adequate incomes, and people to whom the readers of the magazines can relate. In addition, the average household income of the magazines included in this study was relatively high. As mentioned earlier in the Methods section, the magazine that had the lowest average household income was far beyond the income determined to be the poverty line. Thus, while the authors of magazine articles tend to make a number of subtle assumptions, they do so with a clear audience in mind.

SES/Age/Gender

There were no substantial differences between articles in the different SES groups in this study. While research has shown that there are significant differences in the state of health between the lower and high SES groups, there do not appear to be major differences in the articles from magazines associated with high and lower groups. Likely, the sample used here is not truly representative of what the different SES groups are

reading. The magazines that I have included in the lower SES category likely do not represent the segments of the population who live in poverty. Thus, it is difficult to draw any conclusions from this project on differences between SES. The particular limitations of the sample are discussed further under the Limitations section of this project.

The reality that the segment of population that lives in poverty cannot afford to purchase magazines is telling in itself. This portion of the population may or may not be receiving information the way that other portions of the population do. It is important to keep in mind that just because a person cannot afford to purchase items such as magazines does not mean that he or she is not exposed to them through other means (i.e., libraries, friends, reception areas in doctors offices, etc.). In an era that has become commonly known as the "information age," an inability to access some forms of communication and information is likely a disadvantage in society.

The association between gender and cardiovascular disease in the media is interesting. As found in this study, the media are increasingly presenting more and more information on women and heart disease. This increasing portrayal is likely due to advancements in the understanding by the health research community on how heart disease affects men and women differently. Increasing the public's awareness of gender differences in a disease like heart disease is one way that the media addresses an important social aspect of the disease, especially when gender biases are the focus of the articles. Asserting gender biases that exist in the medical system or medical research is one way that the media can play an important role in social change. Bringing gender biases into the forefront of readers' attention may lead to stimulating discussions and changes in the ways that people understand aspects of the medical system.

While there appears to be an increasing portrayal of women and heart disease in the print media, it is interesting to see that some stereotypical gender biases still exist in the media. The portrayal of women as household caregivers may or may not be the norm in the lives of the readers of magazines. In previous decades, such associations may have been more acceptable and "normal" than they are today. Many families in this day and age may not associate a woman as being the sole caregiver in a household. However, extremely traditional gender stereotypes did not make up the majority of gender roles portrayed in this sample of articles.

The portrayal of cardiovascular disease in the print media in terms of age was also investigated in this study. The heavy emphasis on the middle-aged and elderly people in the articles in this sample was not surprising, considering that these are the most common ages for developing heart disease. However, those articles that also chose to focus on the younger years of a person's life are interesting, because they shed light on preventative measures that younger segments of the population can take in order to avoid developing heart disease in later years. For the most part, however, the message of prevention was just as clear across all age groups of magazines. Taking preventative steps in one's life in terms of healthy diets, active lifestyles, and avoiding tobacco products are some of the ways in which people of all ages can possibly lower their risk of cardiovascular disease. While these lifestyle preventative messages are important to portray in the media, it is also important to expand the notion of prevention to encompass the broad range of societal factors that can be addressed to help prevent diseases.

Individualization of Heart Disease in the Media

As outlined in the Findings section of this project, the print media coverage of medical and lifestyle factors of heart disease far outweighed the coverage of socio-structural factors. I have generalized this finding to suggest that, overall, individual factors outweigh broader, systemic factors. I am basing this generalization on the finding that medical and lifestyle portions of the articles were usually discussed in a narrow, personalized sense. This individualized presentation was largely the case as lifestyle-oriented articles tended to present information geared toward the individual reader about making changes in his or her life. Similarly, the medically-oriented aspects of the articles tended to present physiological information about the human body or the disease. This individualization of the disease suggests that the print media in Canada take a particularly reserved stance on the political and social aspects of the disease. Instead of shedding light on ecological aspects of health and illness, the print media that I examined in this study chose to continually emphasize the individual factors of heart disease and stroke. Clarke (1991) found that medical and lifestyle components of heart disease far outweighed the political and economic aspects. As illustrated in the findings section of this thesis, this trend of individualistic portrayal still appears to dominate the print media over a decade later, and also applies when examining the disease from a health promotion angle. In addition, the findings indicate that this portrayal does not differ between magazines geared toward different genders, ages, or SES groups. Implications of this individualistic portrayal are discussed in following sections with reference to victim blaming, morality, society's mixed messages, and individual self-efficacy.

Victim Blaming

The individualistic notions of heart disease that appear so frequently in the media could be interpreted as serving to perpetuate victim blaming around the cause and perpetuation of the disease. Focusing on the individualization of responsibility for a disease like heart disease diverts attention away from important conditions that are also responsible for heart disease. The individual focus places unrealistic emphasis on the role of behaviour and lifestyle in health and wellness. The pattern of individualization and victim blaming that is both so apparent and subtle in the articles in this sample is a dangerous way to portray a disease because it obfuscates the understanding of socio-structural factors of disease by the general public. People continue to read magazine articles that suggest that not only is it their fault that they have developed heart disease, but it is up to them to curb their bad habits and to protect their health. The high prevalence of these messages over socio-structural messages perpetuates this understanding of culpability, and the individual responsibility for this disease becomes part of the normal way that health is viewed.

I found that the articles had very subtle ways of presenting information in ways that quietly put forth notions of victim blaming. Possibly, the authors of these articles did not necessarily intend to put forth any such blame, but nonetheless, this finger-pointing emerged under the guise of several topic areas. These are presented below.

Victim Blaming Masquerades as:

a) Health Education

Victim blaming lurks behind the subtle use of promoting health education in the media as a way of increasing awareness about heart disease and stroke. Health education provides

health information to wide audiences and suggests alternatives to individuals, families, or groups to prevent disease and promote health (Gastaldo, 1997). Several articles in the current study emphasized the importance of raising awareness of aspects of the disease such as symptom identification or risk factors. Although it is important for people to know about these items, the articles are implicitly suggesting that a lack of knowledge on the part of the population is partly to blame for poor health. The message from these articles is that shortcomings in the knowledge of people are part of the reason why people develop heart disease. In the brief article, "Take this to heart," the author outlines this ignorance clearly:

> *In a recent Gallup survey of 815 adults ages 50 and over, 54 percent couldn't identify the symptoms caused by the heart's ineffective pumping action: shortness of breath or fatigue, often following exertion, and swelling of the feel and ankles. And 82% didn't know that a history of heart attack and long-standing high blood pressure are major congestive heart failure risk factors.* (p. 76)

In order to address the problem of heart disease, messages such as this one imply that individuals must increase their awareness of the problem and overcome this ignorance.

Health education has been analyzed in terms of its ability to blame or empower people. Gastaldo (1997) differentiates between traditional health education, those practices that focus on individuals' responsibility for health and disease prevention, and radical health education, those practices that focus on empowering people to control their own health. Radical health education seems to fit more with health promotion and community psychology in that it, "focuses on empowering people to control their own health. It is also committed to combating social inequality in a broad way and promoting community participation in health issues" (p. 117). The use of health education as a tool

for empowering people is an important element in promoting health. Information and knowledge are powerful forces and are central aspects of learning about one's health in order to make appropriate health decisions. However, health education can also be seen as an extension of discipline or the governing of lives and bodies (Gastaldo, 1997). Many health education practices involve imposing "truths" about health, which may limit the individual's sense of choice. Not only can these practices blame the "ignorant" victim for a lack of knowledge, but they can also be a way of impressing a range of social control mechanisms on a population (Gastaldo, 1997).

b) Behaviour Change

Victim blaming also takes on the guise of behaviour change. Focusing on changing the lifestyle behaviours that are deemed unhealthy is one method of promoting health. Articles in this study that encourage readers to change their poor diets or smoking habits for the sake of their health, in fact, are pointing a finger at the individual who participates in these habits. These articles basically insinuate that lifestyle behaviours are largely responsible for poor health. Lifestyle factors do influence heart disease to a certain extent. However, to portray these factors as being the sole important aspects of the disease does not do justice to the full understanding of the disease. Construing a problem as being the fault of an individual restricts the range of potential solutions to interventions that only aim to change those individuals (Levine & Perkins, 1997). A broad range of intervention strategies that address social, political, economic, and environmental issues are often neglected.

c) Empowerment

There is a thin line between empowerment and victim blaming in the articles in this study. Empowerment, from a community psychology perspective, has been defined as "a social-action process that promotes participation of people, organizations, and communities towards the goals of increased individual and community control, political efficacy, improved quality of community life, and social justice" (Wallerstein, 1992, p. 198). In the articles in this sample, however, empowerment was presented more in terms of individuals assuming control and mastery over their health rather than a sense of control gained from participation in political or social contexts. Many articles in this sample encouraged their readers to take control of their health through acts such as asking their doctor more questions or reading the labels on the food that they buy to be better informed as to what they are putting in their bodies. Empowerment and positive affiliations with factors such as diet and quitting smoking ("you can do it!") appeared frequently in many articles. Of course, empowerment was presented in a very individualized manner.

On one hand, I believe that being empowered to take control of one's health is an important concept and one that should be encouraged. Understanding one's own body and what impacts a person's health are meaningful aspects of an individual's health. On the other hand, empowerment that is based solely on the individual level also places the burden of responsibility for health and illness on the individual. An example of individual empowerment is seen in article "Hormones and your heart," which focused on being informed about the benefits and risks of hormone replacement therapy (HRT) as a measure of heart disease prevention. A doctor in the article states:

"I made this decision [to take HRT] as a woman taking control of my life and my future health, knowing the benefits, knowing the risks...." (p. 78).

While this quote depicts a woman who feels empowered over her health, it also reinforces the individualistic notions around the disease. Thus, a paradox exists between the positive aspects of empowering people to take control of their health and the negative aspects of victim blaming that is associated with this individualized empowerment. This paradox is discussed further in the concluding section of this thesis.

d) Prevention

Victim blaming also masqueraded in the articles in this sample in the form of prevention. Prevention is a rich concept that has much potential for being a truly useful notion in affecting people's lives. This potential lies in working to prevent difficulties such as illness, poverty, disease, and depression by focusing on a variety of "upstream" contributing factors instead of treating the "downstream" effects. Indeed, many community programs and policies as well as government initiatives successfully effect change via prevention-driven frameworks regularly. However, in the magazine articles on heart disease in this sample, the concept of prevention is presented in a very individualized sense. Initially, I noted the presence of prevention in the articles as a positive element of the articles. I felt that this was an empowering consideration and a way to inform readers of some of the ways that they could maintain their health. While I still see the benefits of this presentation of prevention, I also see the overly individualistic portrayal of the concept. By focusing on how the readers could prevent heart disease, the articles are implying that any ensuing sickness would be partially a result of lack of attention to preventative factors. Thus, through portrayal of heart disease as a

preventable disease, articles are continually condemning the individual for his or her own fate.

e) Risk

The connection between risk and lifestyle is another way in which victim blaming is implicit in many of the articles in this sample. Risk factors are aspects of the environment or one's behaviour that influence the chances of developing or contracting a disease, within the limits set by our genetic structure (Baron, Earhard, & Ozier, 1999). Discourse on health-related risks has increasingly gained ground in public health domains and in society in general (Barsky, 1988; Lupton, 1995). Barsky (1988) suggested that, " we are obsessed not just with minimizing physical risk, but with eliminating it" (p. 171). Health analysts have separated this discourse on risk into two perspectives. The first perspective views risk as a health danger to populations based on environmental threats such as pollution or nuclear waste; an external threat which an individual has little or no control over. The second perspective associates risk with the consequences of an individual's lifestyle choices; an internal threat which is a function of the individual's self-control (Lupton, 1995).

The findings of the current study illustrate that the media represent risk of developing heart disease as being associated with people's individual lifestyle choices, therefore mainly fitting with the second perspective. In the articles, risk was specifically linked to factors that a person can change. Authors encouraged readers to make lifestyle changes in order to reduce readers' risk of developing the heart disease. Improving diet, quitting smoking, and increasing one's levels of exercise were often presented as ways to reduce risk. Similar to prevention, by associating risk reduction with lifestyle changes,

the authors of the articles were suggesting that the individual is capable of and responsible for warding off heart disease. Judgements by public health workers of what behaviours are considered to be risky has become a tool for identifying populations who are at risk of developing certain illnesses. There is a sense that those individuals or groups who are at risk are at least partly to blame for any ensuing illnesses, particularly those that are strongly linked to lifestyle factors such as cardiovascular disease. The oversimplification of risk in the articles in this sample reinforced this sense of blame by making it seem even more reasonable that the individual should be taking on lifestyle changes to reduce their risk of the disease. The presentation of risk associated with heart disease in the articles in this sample may contribute to a sense of responsibility within the individual for the development of cardiovascular disease.

Moral Implications of Individualized Heart Disease

Stemming from examinations of the individualized portrayal of heart disease, a consideration of the implied moral notions associated with individualized health is also important. The connection between good health, and lifestyle and individual factors, has often been paired with doing what is "right" and being a good person in society. In this secular era, the pursuit of health or "healthiness" has replaced "Godliness" as the measure of an individual's accomplishment or morality (Lupton, 1995). Health promotion, therefore, is seen as contributing to the moral rightness of society because it strives to improve the health of the people. Leichter (1997) used the term "lifestyle correctness" to represent the health-enhancing behaviours that the individual has control over. He suggested that those people who adhere to lifestyle correctness are equated with a certain virtue, as health has come to represent a "secular state of grace" (p. 360). The pursuit of

health through "lifestyle correctness" serves the interests of some groups in society and at the same time acts as a social discriminator. There is substantial overlap between those who pursue lifestyle correctness and middle and upper class status (Leichter, 1997). Indeed, individuals of lower affluence cannot afford the luxury of purchasing home gym equipment, comfortable running shoes, organic foods, or lifestyle and health oriented magazines for that matter.

Notions of individual responsibility for disease have been apparent in political and health circles for decades (Dodds, 2002). Consider the following quotation by John Knowles, an important advocate for individual responsibility in the 1970s: "I believe the idea of a 'right' to health should be replaced by the idea of an individual moral obligation to preserve one's own health – a public duty if you will" (Knowles, 1977, p. 59). This remark not only places the onus of responsibility on the individual, but also implies that those who become ill are at fault for not taking care of themselves and have let down the community of which they are a part. Being unhealthy, according to this way of thinking, is associated with not taking care of oneself as well as failure in a moral obligation to further developing society. This angle is also captured in the statement: "The next major advances in the health of the American people will be determined by what the individual is willing to do for himself and for society-at-large" (Knowles, 1977, p. 78).

According to Crawford (1994), individualistic health ideology gained popularity during the late 1970s because of several factors. These factors include a pending crisis around the rising costs of health care, paired with the increased demand by the American population for universal health access. These factors fueled governing bodies' decisions to shift some of the responsibility for health and illness onto the public. In addition, a

new perspective on health delivery as a more prevention-oriented system was put forth by Canada's *Lalonde Report* (1974) and aided this rise of individualism because of its focus on prevention and lifestyle. The shift to individual responsibility for health allowed government and social service institutions off the hook and diverted attention away from any socio-political or environmental causes of health. Blaming people's lifestyles and their dependence on the medical system became tools in this individualistic health ideology (Crawford, 1994).

Mixed Messages

Society is filled with mixed messages regarding health and lifestyle. The print media are conveyors of these mixed messages. On one hand, articles and advertisements encourage readers to make the "healthy choices" and to cut out fat in their diet, and to walk instead of drive to their destination. As seen in this study, these are major messages in the portrayal of heart disease. On the other hand, these health messages are sandwiched between advertisements and promotions for an enormous range of items which are considerably less than healthy. For example, in magazines such as *Cosmopolitan* and *Biography* advertisements for alcohol, cigarettes, and pop are spaced intermittently between advertisements for salad dressings, cosmetics and pasta. Commercials for fast food franchises, candy bars, and potato chips are ubiquitous. These products are major driving forces behind the consumption and production oriented economy that is a foundation in North American society. "Buy! Try! Consume!" Our economy depends on the consumption of disposable commodities and the market for health-related products and services is booming. Individuals must navigate their way through a never ending mass of mixed messages, a task that can be confusing and

frustrating, especially if the individual feels entirely responsible for his or her health and illness.

Individualization of Heart Disease: Hinders Self-efficacy?

Another implication of an individualistic portrayal of heart disease is that it may inhibit some people from taking steps to improve their health. Health research and literature in the area of health behaviours have addressed the connection between self-efficacy and healthy lifestyles. Low levels of self-efficacy, which is defined as individuals' expectations concerning their ability to perform various tasks (Baron, Earhard & Ozier, 1999), can be a barrier to health behaviour change (Prochaska, Johnson, & Lee, 1998). For example, an individual's self-efficacy is tied to how successful a person feels he or she might be in adopting a daily fitness routine. Possibly, the media's tendency to over associate poor health behaviours such as smoking with poor health may damage a person's perception of his or her own ability to habitually participate in some health promoting behaviors (i.e., quitting smoking). Some people may associate guilt with aspects of their lifestyle. However, if people had a broader understanding of illness through media exposure to the wider aspects of the disease, and thus had a more accurate picture of all of the factors involved, this guilt may be diffused. A lessened sense of guilt may affect the way that they feel about themselves and their ability to change their lifestyles. This speculation might make the foundation of interesting health behaviour research on the connections between behaviours, health understanding through media exposure and self-efficacy.

Socio-structural Factors Addressed by the Print Media

While medical and lifestyle content received the most attention in the articles on heart disease and stroke in this sample, some socio-structural aspects also received some attention. One of these socio-structural areas which received adequate coverage was gender and heart disease. Comparisons between genders in typical symptoms, average age of onset, and incidence of the disease were quite common, especially in the more recent articles. As already mentioned, this increasing coverage of women and heart disease in magazines is partly due to a shift in the understanding of how heart disease affects women, and the realization that women are just as vulnerable to the disease as men are, only at later times in their lives. This information about the gender incidence of the disease is an important way that the media is beginning to address the broader understanding of heart disease.

A small portion of the articles mentioned sexism and racism in the medical system. Some of the articles that specifically discussed women and heart disease touched on gender bias in medical research and practice that place women at a disadvantage in terms of receiving proper medical care and information. For example, in the article "Heart disease often ignored in women," the author focused on the discrimination and bias that women and minorities face in the emergency departments of hospitals. According to a study cited in this article, women and visible minorities were more likely to mistakenly be sent home after having a heart attack because they are generally not considered to be at greatest risk for heart disease. Similarly, in the article "Is your heart healthy?" the author discussed the gender and race bias that African American women face in the medical system. This article made the point that African American women are

less likely than Caucasian men and women, and African American men to be referred for catheterization, a standard procedure for examining the heart. Another article, "Healthy hearts for both of you," addressed the fact that for years, much of the medical research found that women were less at risk for the disease, because when the same aged women were compared with the men in the studies, women were found to have a lower incidence of the disease than men. It was not until later years that researchers realized that women are in fact at similar risk as men are, but at a later age. Media coverage of biases that exist in major societal institutions, such as the medical system, is an important way of shedding light on systemic prejudices that are embedded in our culture.

Socio-structural Factors Neglected by the Print Media

The articles in this sample neglected many of the socio-structural aspects of heart disease. This oversight by the media is becoming less and less acceptable because of the increasing acknowledgment of broader aspects of the disease by health fields. One of the broader elements of the disease that the authors of the article could have paid more attention to is poverty. People of lower SES are more likely to suffer from illness and premature death, work in dangerous and stressful jobs, live in polluted areas, have less social support, experience lower self-esteem, be generally unhappy and experience depression, anxiety, self-blame, and low levels of perceived power (Labonte, 2000). For example, pregnant women living on low-income have less access to health care than those living on high-income, endangering the lives of their children, and those living in poorer neighbourhoods are exposed to greater environmental pollutants and stresses (Allen, Taubert, Deckelbaum, Driscoll, & Dunnigan, 1991). Yet, none of the articles in the sample in the current study made the connection between poverty and the disease.

The articles were more likely to focus on promoting wellness through the consumption of peanut butter and red wine, as examples, instead of addressing the fact that dealing with poverty issues are an effective way of promoting people's heart health. By presenting the association between economic factors such as income and disease morbidity in the media, people would have a better understanding of how they can work together to advocate for changes that affect health. While increasing information does not necessarily lead to increased action on an issue, simply knowing more about the impact of poverty might be the impetus that leads to action. Awareness of how important the role of income is in people's health may cause a shift in people's perception of current policies and decisions that impact the economic situation of people in one's community. Other socio-structural areas related to poverty include unemployment, homelessness, poor or unsafe working conditions, unequal educational opportunities, and poor wages. These issues were not addressed or associated with health in the articles on heart disease in this sample.

The link between socio-structural factors and stress was another area that was neglected by the articles in this study. Several articles in the sample addressed stress as being a risk factor for heart disease, but it was never paired with notions beyond the individual level. Stress affects psychological processes in the body which in turn affect biological pathways potentially leading to the development of heart disease (Marmot & Stansfeld, 2002). Psychosocial stress includes lack of control in one's life, feelings of hopelessness, and loss of self-esteem (Wallerstein, 1992). The magazine articles often suggested that readers need to reduce the stress in their life in order to curtail their risk of developing heart disease. Unfortunately, some people cannot simply reduce this level of stress. For financial reasons, they cannot quit their stressful job because it provides the

only income that their family will see that week. For some people, the physical environment that they live in contains industrial or noise pollutants that contribute to the stress that they feel regularly. However, moving away from these low-income neighbourhoods is not an option for some people, because it is the only housing they can afford. Stress affects people differently, and likely influences the types of behaviours that people engage in such as smoking, eating certain foods, and drinking (Stronks, van de Mheen, Looman, & Mackenback, 1996).

Another socio-structural topic area that was only barely touched on in this sample of articles is lack of social support and the role that it plays in affecting heart disease. Studies have shown that social support gained through social networks and relationships has positive effects on cardiovascular disease. The degree to which people feel part of a social network, or belong to a community directly affects their health (Berkman, 2000; Kooman, Kniesmeijer, Vos-Panhuijsen, & Velthuijsen, 1990). According to Orth-Gomer (1994) paying attention to a patient's social network may be equally important as a cardiological examination. Thus, addressing the relationships and sense of belongingness in a person's lives are very important to the health of their heart. Raphael (2001) discusses isolation or social exclusion as being linked to material disadvantage, excessive psychosocial stress, and unhealthy behaviours, all of which are precursors of cardiovascular disease. Being removed from community decision-making processes and common cultural processes is part of this exclusion. Individuals living in poverty or low-income are particularly vulnerable to this sense of social exclusion (Raphael, 2001).

Only a handful of articles in this sample mentioned the relationship between social support and cardiovascular disease. Two of these articles appeared in 1990 and

discussed the effects of isolation on heart disease, and the importance of supportive counseling linked specifically to a lifestyle-changing program. One article from 2000, "24-day program to stop a heart attack," mentioned the importance of relationships with friends, family and community in order to reduce anxiety and depression, which increase the risk of a heart attack. The articles that did mention social support discussed it as one element of a healthy lifestyle instead of a societal problem that is linked to a breakdown of a sense of community and increased loneliness and other mental health struggles. According to one researcher, social support involves four components: 1) emotional connectedness with close friends and family, 2) appraisal support obtained from more peripheral member of social network such as co-workers, 3) tangible support, which is support associated with practical life matters, as well as 4) belongingness, or a sense of being part of a group (Orth-Gomer, 1994). Fostering a sense of community is an important part of this perceived social support. Strengthening social networks may be one way of dramatically impacting preventative as well as rehabilitative efforts for cardiovascular and other diseases.

Increasing the exposure and awareness of the impact that social support can have on quality of life may be one way that the media can aid in this effort. By making more connections between social support and health or happiness, the media can contribute to moving society towards a more collective way of thinking about life choices. This move can be accomplished by printing more stories about the social factors of health and other non-individualized factors. Some articles do portray this social factor. In this sample, the article, "My problem: My mother wouldn't stop smoking after a heart attack," is a narrative about a woman, whose mother had a heart attack and refused to quit smoking to

decrease her risk of another attack. The daughter angrily distanced herself from her mother, demanding that the mother stop smoking or else risk losing her relationship with the daughter. Finally, after much heartache, the daughter decided that her relationship with her mother was far more important than obsessing with a lifestyle element that was not going to go away. She mended the relationship with her mother and accepted her, even with her smoking habit. While this story was likely meant to pull on the reader's heart strings more than purposefully establish a link between heart disease and social support, it is effective in illustrating the importance of supportive relationships in relation to heart disease and stroke. While the articles in this sample did address some socio-structural factors, the implications of the neglected structural factors are outlined below.

Implications of Neglected Socio-structural Factors

The presentation of heart disease in the media likely influences the way that people confront or cope with the disease in their lives. The individualistic focus that dominates media coverage may lead people to take medical or lifestyle action toward addressing the disease in their lives because of the individualized messages that they are exposed to regularly by the media. Upon the development of the disease, this form of action makes perfect sense for a person or family who are faced with dealing with heart disease. Trying to prevent further deterioration of health and attempting to improve the quality of life for that person is undoubtedly an important way of addressing the illness at the disease level.

In terms of dealing with the disease from a community or collective perspective, however, this type of individualized action makes little sense. In order to address the broad incidence of heart disease across communities, change needs to take place in the

social, political, and environmental aspects of society as well as in individuals' lifestyles. This change would be facilitated by civil action. People may be less likely to engage in social organizing in order to advocate for equality or the reduction of poverty as a way to *specifically* address heart disease if they do not have a complete understanding of the impact on health that their actions could have (i.e., eventual decrease in the incidence of heart disease). Awareness of the ecological impact of the broader social and political factors on people's health is not something that media coverage on heart disease helps to foster. By neglecting to address these issues, the media may be discouraging collective action in addressing heart disease.

Implications of the lack of socio-structural aspects of heart disease and stroke in the media also span policy development and implementation. By neglecting to address the societal impacts on heart disease, the media coverage on health issues is allowing policy makers to sidestep their job of addressing societal inequities in health through effective social policies (Raphael, 2002). Social policies that jeopardize people's health continue to prevail partly because of this cultural understanding of individual responsibility for health. For example, in recent decades in Canada, the weakening of social safety nets, decreasing eligibility for benefits, and reducing the absolute level of these benefits has served to increase the incidence of poverty as well as reduce the means by which those who live in poverty are able to sustain themselves (Raphael, 2002). Decreased spending on social services has resulted in an increased level of poverty in Canada which places more people at risk of health related problems (Raphael, 2001). Instead, healthy public policy must promote health within the context of social,

economic, and physical environments and reduce inequities in access to medical care and community resources (Hamilton & Bhatti, 1996).

Prevention Revisited

The portrayal of prevention of heart disease in the print media has been addressed in both the Findings section and the current Discussion section in this project. It seems that prevention of heart disease and stroke is a re-occurring theme in the articles in this sample, and that prevention is largely presented in the secondary sense. As defined earlier, secondary prevention refers to interventions given to individuals or populations that are already showing signs of a difficulty, as opposed to primary prevention, which is an intervention given before the difficulty begins (Dalton et al., 2001). Often readers were encouraged to lower their cholesterol through improved diets and increased exercise regimes in order to lower their chances of a heart attack after signs of the development of the disease appear, or to avoid a *second* heart attack after an initial attack.

In this sample, prevention was often associated with daily, lifestyle, and medical rituals that aim to curtail an individual's chances of developing heart disease in the first place. While this form of primary prevention can be effective at one level, magazine articles need to identify more primary preventative interventions that move beyond behavioural factors and address broader aspects of the disease. For example, an effort that aims to ameliorate housing conditions in a low-income neighbourhood in order to reduce stress levels and positively affect health is an example of an intervention that would have an effect on the heart health of people in that neighbourhood. Associating these types of ecological, preventative actions with heart disease and stroke are ways that the media can begin to draw connections between societal factors and the disease.

Expanding the public's conception of the term "prevention" to include socio-structural elements is an area of media coverage that needs to be further developed.

Health Promotion and the Media: Missing Links?

In the past, health promotion initiatives and programs have had a tendency to focus too much on lifestyle factors. Health promotion has evolved from an approach that was once overly focused on lifestyle and health behaviours as a way to promote health, to an approach that is increasingly more concerned with the underlying, broader elements of health (Bhatti & Hamilton, 2002). A shift towards a population health model of research and perspective began in the 1980s and 1990s by acknowledgement of the importance of socioeconomic and political impacts on health by researchers and health promoters. Increasingly, there is more research in this area of health and society. The field of population health is growing, as there are more and more researchers entering the field and more interest on the part of funding and government agencies in supporting these research activities. Academic institutes dedicated solely to the study of population health are becoming increasingly common. Also, many health establishments and public health departments now incorporate broader aspects of people's health such as housing issues, environmental and employment programs into health promotion programs and agendas. This shift is also evident in the initiation of various health promotion programs geared toward specifically improving the health of a community and the environment such as the World Health Organization's (WHO) *Healthy Cities and Healthy Communities* (Bhatti & Hamilton, 2002). While the shift toward population health oriented research and programs is a positive move, many critics still feel that there is much work left to do in order to reverse the unhealthy focus on the individual responsibility for disease (Dodds,

2002). While population health is gaining more ground in areas of research, the question of how to effectively implement far reaching strategies for the improvement of the population's health remains a point of active discussion.

So if much of health research and health promotion strategies may appear to be turning to a broader examination of health impacts, why do the media continue to focus on individualistic factors? The discrepancy between the media's focus and the focus of the field of health promotion may exist because the media, in a sense, have not yet caught up to the shift toward ecological understanding that the health field has experienced in recent decades. Demarest and Garner (1992) discussed how the media coverage on changing social conditions tends to lag behind actual societal changes. The increase in media coverage of women and heart disease in recent years is a positive example of how the media is "catching up" with research on gender associations and heart disease. The information gap between the media and health research field, particularly in the coverage of heart disease, may also represent a missing link in the communication between health researchers and media. The findings from the current project may signify a need for improved communication between researchers and media.

Social Control and Maintenance of the Status Quo

Analyzing how media portray a disease like heart disease is one way of beginning to uncover the possible ways in which one of society's institutions manage and manipulate the messages that contribute to the construction of society. The individualistic portrayal of heart disease in the magazines that many Canadians read regularly demonstrates that a certain perspective on this disease, and perhaps on health promotion in general, is being over emphasized to the detriment of other equally pertinent

information. Analyzing this narrow portrayal has shed light on the subtle ways in which the media can support or further the political agendas of groups who hold power in society. The use of health by governing bodies as a subtle tool to exert power over the way people feel about and live their lives is a powerful mechanism.

In a politically conservative era and a time of fiscal restraint in most parts of Canada, it is no wonder that the mainstream, media messages being portrayed fit into this agenda. Promoting the health of the individual and encouraging people to take control of their health keep the focal point of liability squarely anchored on the individual and not on the governing institutions. The continuation of individualistic messages in the media work to maintain this status quo and serve as a barrier to allowing messages through that may taint this sense of responsibility. Whether or not health reporting in the media purposefully promotes this corporate or political agenda is difficult to speculate upon here. What can be said, however, is that the individualistic construal of health by the media perpetuates the exaltation of the individual in our society and aids the further breakdown of a sense of community. This breakdown is served by placing the health of the individual over that of the health of the community.

In order to address these issues there needs to be increased acknowledgement and coverage of the broader aspects of health by the print media. How the structure of society and people's economic situation influence health are important aspects of health and wellness and should be presented and discussed openly in the media. Alternative media sources (e.g., indy media, rabble.ca) give more voice to non-mainstream, social ideas than what the mainstream media do. These publications offer a watchdog perspective to social happenings by drawing attention to aspects of societal events that

don't always make the mainstream "news." These forms of media may be useful in affecting the face of health as the media portrays it and in affecting the way that health is understood by the public.

Limitations

This study contains several limiting factors that need to be addressed. First of all, the sample of magazines used in the study is limited in terms of examination of different socio-economic status, age, and gender. Comparing the health information being portrayed to different SES groups through the print media is a relatively untouched area of research. Determining the best way to associate SES with magazine type is something that will need further attention in the future if this type of research is to be further investigated. In my sample, the fact that the median income of the "lower" SES groups are considerably higher than the income level that is considered to represent the poverty line by Statistics Canada may indicate that my SES comparisons between "high" and "lower" income groups are limited. These comparisons tell very little about what people who live in poverty might be reading and whether or not this differs from groups of higher SES status. Thus, one of the main purposes of this study, which was to compare high and low SES groups on the type of heart-health information they read, is severely limited by the sample in this study. This limitation renders statements about differences or similarities in the portrayal of heart disease in the print media between high and low SES groups very difficult to make. What this study does reinforce, however, is that magazines that are purchased by the middle and upper SES groups are similar in their portrayal of heart disease in terms of lifestyle, medical, and socio-structural content.

Another limitation is the small size of the sampled articles. As I was trying to keep the number of articles in each SES group somewhat similar, I under-sampled articles from the high SES group, while choosing to read all of the articles form the lower SES group. This procedure kept the sample size fairly limited, because the number of articles in the lower SES group for each year was rather small. This limited sample size rendered the groupings of different gender and age magazines disproportional across groups, another major limitation to this study. In addition, choosing to examine articles on heart disease from 1990, 1995, and 2000 only contributed to the small sample size in this study. It may have been more useful to look at additional years, such as alternating years during the decade.

Another limitation to the current analysis, is the blurred distinction between lifestyle and medical content in the articles. Because I examined the articles paragraph by paragraph and designated each paragraph as lifestyle, medical or socio-structural, there were times when a lifestyle-focused article would have more paragraphs dedicated to a medical discussion or descriptions. In these cases, the article would be coded as including more medical content than lifestyle content when, overall, the topic was generally about a component of lifestyle. Possibly, this process may have affected the portion of articles under each of the lifestyle and medical groupings. It would be useful for researchers in the future who examine lifestyle, medical, and socio-structural aspects of health in the media, to include a category for information that overlaps between medical and lifestyle content.

It is difficult to determine the transferability of this data to other research situations. In terms of transferring the findings from this study to other diseases, the

difficulty lies in that every disease is different, not only biologically, but also in its social construction and the social understanding of it. These differences make it impossible to assume that other diseases receive the same type of media coverage as cardiovascular disease receives. A disease like AIDS, for example, has distinct social meanings, associations, and implications that may not apply to a disease like heart disease (i.e., AIDS is often associated with promiscuous sex or intravenous drug use).

In terms of transferability of the coverage of heart disease in other forms of media, I suspect that analysis of the portrayal of heart disease in other forms of media (i.e., television) may produce somewhat similar results. This prediction is based loosely on the heart disease information that I am exposed to regularly by other forms of media. Television and the internet reach an incredibly wide audience, and an analysis of the portrayal of heart disease in these forms of media would be an interesting study.

Future Research

This research can be expanded or furthered in several ways. It would be interesting to step beyond the *portrayal* of heart disease in the print media and examine the actual *perception* of heart disease in the print media. This type of study could be accomplished by conducting focus groups or interviews with community members who read different magazines. While I have suggested that the individualistic portrayal of heart disease works to further a sense of victim blaming and the breakdown of a sense of community, it would be interesting to find out if people who read these articles on a daily basis have the same perception. If they do not have this perception, is it because they are unaware of the subtle effects of media on the way they construe their lives and themselves?

This research could also be expanded to include examination of other forms of media such as television or newspapers. These forms of media reach different or wider audiences and may portray heart disease slightly differently. It would also be interesting to examine other diseases or aspects of health from a health promotion perspective.

Next Steps

As part of the final steps of this project, I will be submitting an article to the local media for publication. The purpose of this article, a copy of which appears in Appendix E, is two-fold. The first purpose is to write an example of an article that portrays a picture of health that includes socio-structural aspects. The second purpose is to use the media as a way to disseminate the findings of this research to a wide audience. Publishing the results of a media analysis in the media itself may be one way of drawing attention to the lack of political, economic, environmental, and social factors that contribute to health. The most likely form of media that this article will be submitted to is the local, daily newspaper or a community magazine.

Conclusion

Promoting health should be undertaken at several different levels. The individual level, organizational level, community level as well as the broader society are all realms in which health should be discussed and pursued. In the print media portrayal of heart disease, there appears to be a paradox between empowering the individual to take control of his or her health, and blaming him or her for living a "poor" lifestyle. One way that this paradox of empowerment can be resolved is by empowering people through health education and behaviour change within the context of environmental change. Dodds (2002) suggests that both social and individual agency over health need to be enhanced

simultaneously in order to successfully promote health. She says, "I would argue that health promotion efforts that only focus on the individual, or only on the social context will have little effect. In isolation, each of them works against the other..." (p. 167). Encouraging communities to alter their lifestyle habits should be undertaken if the contextual conditions are supportive and conducive to this change. For example, putting up posters in a low-income neighbourhood that encourage people to choose more healthier foods to eat is most appropriate, if there is an accessible grocery supplier in the area that sells healthier foods that are affordable for the average family in the area. Pancer and Nelson (1996) advocate for a social action approach to health promotion to directly address the unequal distribution of power and wealth in society, which is at the root of health problems amongst the poorer segments of the population. This approach focuses more on the political and economic aspects of health promotion rather than the individual or behavioural aspects (Pancer & Nelson, 1996).

The increasing use of ecological or collective behavioural framework to guide health promotion activities, programs, and research, may serve to loosen the individualistic hold that is still associated with heart disease. Increasing the prevalence of ecological methods as well as improved communication with media by health researchers may further this goal. One point of encouragement is in the fact that health promotion campaigns that use the media as part of their initiatives have begun to move from being exclusively behavioural and individual based, to recognizing the environmental influences on behaviour (Finnegan, Viswanath, & Hertog, 1999). Health promotion in workplaces and neighbourhood settings are environments in which people live and share fundamental characteristics. Through focusing on these collective settings it may be

possible to understand what aspects of people's lives put them at risk and to address these from the environmental standpoint (Frohlich & Potvin, 1999).

Media portrayals of health and disease make important contributions to the social and environmental contexts in which communities exist. Media messages are everywhere and impact the way people view and understand the world. These contexts, which are in part constructed by media, can be conducive to the promotion of health, or hindering to the promotion of health. Thus, media messages that portray the big picture, or ecological aspects, of a disease like heart disease provide more information on the societal components of the disease than individually focused messages do. By understanding more about the socio-structural factors of a disease, communities may be more likely to be empowered to work collectively to address social issues that affect health rather than work individually to improve their diets and exercise regimes. While these individual efforts are important and effective in promoting health, collective media messages may foster collective action more so than individual messages. Working together to address underlying, systemic aspects of social problems of disease may be the best way to get to the root of the problem, which is the essence of community psychology.

Reflections

One of my goals for this project was to bring myself to a place of critical understanding of health promotion and its relationship with community psychology. Interestingly, along the road my learning has taken several detours and tangents, some of which have involved more struggles than others. My experience with this project has not only broadened my understanding of health promotion, but has exposed me to several

unexpected aspects, which have brought me to a place of critical comprehension. I am confident that I have met my learning goals and have pushed the boundaries of my perspectives and thinking.

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Appendix A

Complete list of magazines that were included in the sample.

High Income Magazines	*Median Income*	*Low-income Magazines*	*Median Income*
American Magazines	US$	*American Magazines*	US$
*Better Homes and Gardens	53692	American Legion	37719
Boating	67522	Arthritis Today	40616
*Glamour	54172	*Ebony	36240
*Golf Digest	76399	*Essence	38688
*Good Housekeeping	51447	*Family Circle	46834
Handguns	54642	*First For Women	48811
In Style	70909	Health	47050
*Men's Health	59271	National Enquirer	40096
*Muscle and Fitness	56829	Star	38288
*Newsweek	64834	*Woman's Day	47516
*People	58587	Woman's World	43351
*Popular Science	58014	YM	45338
Shape	60770		
*Sports Illustrated	56881		
Canadian Magazines	CDN $	*Canadian Magazines*	CDN$
*Canadian Business	77342	*Good Times	43864
*Canadian Living	60631	Gardens West	55204
Canadian House and Home	NA	Images	53501
Food and Drink	68068	*Reader's Digest	54729
Golf Canada	70612	TV Week Magazine	53336
*Homemakers Magazine	60282	TV Guide (USA)	51988
*Maclean's	62832	Fifty Plus	58475
National Post Business	79765	New Choices	NA
Outdoor Canada	60361		
Profit	76280		
Report on Business	82380		
Saturday Night	71028		
Starweek	66321		
Toronto Life	72146		
Vancouver Magazine	72230		

Note: *Magazines that had articles on heart disease and stroke, which were included in the sample of articles that were analyzed in this study.
NA refers to information that was not available.

Appendix B

Coding Sheet

Coding Sheet

Name of Article_____
Source:_____
Author:_____

Article is about:

Lifestyle – what aspects?	%?
Medical	%?
Socio-structural	%?

Narrative? About who?	
Celebrity	
Gender (obvious portrayal)	
Gender (implied through language)	
Age (implied or stated)	__Under 20 __20-40 __middle age __seniors
Language points	

Use of the term "RISK" (Simplified?) (Decontextualized?)	
Epidemiology/statistics	
Language in title	
Credentialism	
Pictures	
OTHER comments	

Appendix C

Inter-rate Comparison of 16 Articles

Article	Christina's Analysis			Second Rater's Analysis		
	Lifestyle	Medical	Social-structural	Lifestyle	Medical	Socio-structural
3 Hours to save a life	-	97%	3%	-	82%	18
Healthy hearts for both	43%	54%	4%	44%	44%	11%
Vitamin C: How much?	-	100%	-	-	100%	-
Protect your heart with peanut butter – Really!	71%	29%	-	80%	20%	-
Test your brain	78%	22%	-	67%	33%	-
Silent and deadly	14%	86%	-	25%	75%	-
Medical miracle or myth?	50%	50%	-	50%	50%	-
Are you a woman at risk?	39%	56%	5%	29%	53%	18%
Ancient help for the heart: Tofu	73%	27%	-	36%	36%	27%
Women should fear this disease	17%	66%	17%	17%	71%	13%
Have a healthy heart	48%	52%	-	56%	44%	-
That gnawing anger	-	100%	-	-	100%	-
Not too late for folate	29%	71%	-	29%	71%	-
Helping hearts faster	-	100%	-	-	100%	-
User-friendly fat	100%	-	-	11%	67%	22%
Heart disease often ignored in women	-	50%	50%	-	50%	50%

Appendix D

Cited Magazine Articles

1990

Comeback time for coffee. (1990, Oct. 22). *Time*, p. 59.
Fight cholesterol with exercise and low fat diet. (1990, Dec. 1). *Canadian Living*, p. 227.
Good food-picking seal. (1990, Jan. 29). *Time, 135*, p. 80.
Heart attack. (1990, Nov.). *Good Times*, p. 21-22.
Heart of the matter. (1990, Oct. 21). *Essence*, p.25-26.
In his own words. (1990, Nov. 26). *People, 34*, p. 123-125.
Lower your blood pressure. (1990, April). *Reader's Digest*, p. 105-108.
Move away from heart attack. (1990, April). *Prevention*, p. 12, 16.
Reverse heart disease naturally (1990, May). *Prevention*, p. 51-61.
Second hand smoke: Grim news. (1990, June 11). *Newsweek*, p. 59.
State of the heart. (1990, Feb.). *Prevention*, p. 22-23.
Wonder drug. (1990, July 16). *Macleans, 103*, p. 38-41.

1995

A drink to your health. (1995, July/Aug.). *Men's Health*, p. 33.
Going for the French factor. (1995, August). *Prevention, 47*, p. 74-79.
Hormones and your heart. (1995, May). *Prevention, 47*, p. 70-78.
Knock out number three. (1995, Sept.). *Prevention*, p. 5-6.
Miracle of life. (1995, July). *People Weekly*, p. 79-81.
Not too late for folate. (1995, March). *Prevention*, p. 28+.
Stroke-prevention update. (1995, June). *Reader's Digest*, p. 104.
The lady killer. (1995, Sept.). *Canadian Living*, p. 65-71.
Time for a heart attack? (1995, March). *Reader's Digest*, p. 92.
War on fat. (1995, Jan 16). *Macleans, 108* (3), p. 46-51.
Women and heart disease. (1995, Nov.). *Good Times, p.20.*

2000

24-Day program to stop a heart attack. (2000, June). *Prevention*, 57 (6), p. 122-131.
Are you a woman at risk? (2000, Oct. 3). *Family Circle*, 113 (14) p. 100+.
Eat smart: Never too early, never too late. (2000, Feb. 21). *Newsweek*, p. 20.
Ensuring a healthy heart. (2000, Fall). *Good Times, 11* (2), p. 16-20.
Fight against stroke. (2000, March). *New Choices, 40* (2), p. 44-48.
Get fresh and prevent stroke. (2000, Aug). *Prevention*, p. 60.
Have a healthier heart. (2000, April). *New Choices*, p. 23-26.
Healthy hearts for both of you. (2000, March). *Canadian Living*, p. 35-38.
Heart disease often ignored in women (2000, Aug). *Family Circle*, p. 60.
Is your heart healthy? (2000, Feb). *Essence*, p. 32, 36.
Journey of the heart. (2000, July). *Reader's Digest*, p. 16-18,21.
Never too early. (2000, Aug.). *Essence*, p. 86.
Pump it up. (2000, Feb.). *Popular Science*, 256, p. 43.
Protect your heart with peanut-butter – really! (2000, May). *Prevention, 52* (5), p. 58-59.

Taking it to heart. (2000, Feb/March). *Homemaker's Magazine*, p. 65-68.
Taming the stroke. (2000, Mar. 20). *Macleans, 113* (12), p. 60+..
Tap the power of extra virgin olive oil. (2000, June). *Canadian Living*, p. 27.
Test your brain. (2000, April). *Men's Health*, p. 54.
The heart disease prevention guide. (2000, Nov. 14). *Woman's Day*, p. 49-60.
Warning at the waist. (2000, Sept. 11). *Maclean's, 113* (37), p. 49.
Walk to your heart's content. (2000). *Golf Digest, 51* (2), p. 88-90.
We love fish. (2000, Oct. 30). *Time, 156*,(18), p. 50-51.

Appendix E

Example of article to be submitted for media publication

The Big Picture of Heart Disease

Recently, I received a phone call from an old friend, Sarah, who told me that her father had suffered a minor heart attack. The news caught me by surprise because Sarah had never mentioned that her father led an unhealthy lifestyle. In fact, this 58-year-old man seemed like the type to eat healthy meals and get enough exercise. My initial reaction was to think, "Well, maybe he did drink a little too much on occasion" and "Did he *really* exercise? Maybe he didn't to the right *type* of exercise." Thoughts like these automatically jumped to my mind because, like most people, I have learned to associate heart disease with these lifestyle factors.

Eat less fat! Head to the gym! Toss those cigarettes! These are messages that we often associate with avoiding heart disease because these are the messages that are most apparent when we flip through magazines, newspapers, and television channels. To keep our hearts healthy, we are advised to change our diets, increase our exercise, and reduce alcohol and tobacco use. Every week, it seems there is an article or column somewhere singing the praises of a new type of heart-friendly butter or rowing machine that we should incorporate into our routines for the sake of our hearts. While these "lifestyle" aspects of our health are important to cutting our chances of heart disease, they may not be the *only* important factors involved in heart disease.

As part of my master's degree in community psychology from Wilfrid Laurier, I recently finished a research project where I looked at what type of information the media portrays on heart disease. As part of this project I reviewed a body of literature that enlightened me on a whole range of factors associated with heart disease. Interestingly, all of those snappy lifestyle messages about improving diets, increasing exercise, and cutting out cigarettes that we see and hear all over the media may not be telling of the whole picture of this disease. The media overemphasize lifestyle aspects to the oversight of other influential factors. These factors stretch *beyond* daily lifestyles. The social context, physical environment, political and economic contexts around us, and the very make-up of society all contribute to our health in very important ways!

Health research has consistently shown that people living on limited income experience higher rates of most heart disease. Many of the root causes of heart disease lie in the unequal distribution of resources in our society (Wilkinson, 1986). A report by the North York Heart Health Network, *Inequality is bad for our hearts: Why low income and social exclusion are major causes of heart disease in Canada,* suggests this exactly. This report states: "The economic and social conditions under which people live their lives are the major factors determining whether they develop a variety of diseases including heart disease" (Raphael, 2001). So, it sounds like limited income is worse for your heart than French fries! According to this report, individuals on limited income don't participate in many aspects of society, are excluded from many civil decisions and deprived of many goods and services that other people may take for granted. Some people may have less access to health-enhancing resources because of their limited budget. All in all, this report suggests that this "social exclusion" from community contributes to the poor health and quality of life that many people experience. For some

people, struggling to make ends meet heightens the stress in their lives. It also limits the quality of the food they eat and the time or desire to exercise.

Affording regular healthy meals is difficult for some people. The stress related to not being able to make ends meet leads to unhealthy nutrition and living. Similarly, individuals who live in neighbourhoods situated next to noisy or chemically polluting industries are often stressed and feel a low sense of control. These factors are associated with the development of heart disease (Raphael, 2001). While they may feel compelled to move away from the unhealthy environment, they may not be able to afford such a move, or they may not want to move! This stress might lead anyone to take solace in a bag of potato chips or a pack of cigarettes in an attempt to deal with the stress!

A weakened sense of community may also contribute to stress and poor health. Decreased levels of social cohesion in a community can lead to hopelessness, which can cause deterioration in people's health (Raphael, 2001). Feelings of isolation is part of this problem too. The stress associated with loneliness compels people to engage in unhealthy lifestyle habits. Perhaps people even lose the desire to actively contribute to their community. This furthers the breakdown of the sense of community in our society. The sense of community is an influential factor in people's health, yet it is something they we rarely associate with a disease like heart disease. Instead, we are bombarded by the media with messages about low-fat yogurt and gym memberships as ways to combat the disease. We are led to believe that adjusting our snacking habits (for example) is the most important factor in avoiding heart disease. While making healthy decisions in our lives may be pertinent for our personal health, there would be dramatic reductions in the *overall* incidence of heart disease if people focused on the broader aspects of lives and communities as well.

So, while I was so concerned about Sarah's father's eating and drinking habits, there were other aspects of the man's life that I should have questioned. Was he poor during his life? Did he live in a polluted area of town that caused him stress? Did he have supportive relationships in his life to help him deal with stress? Was he a victim of cutbacks to social services that left him unsupported in the wake of a financial crisis? Questions like these tell me as much, if not more, about the state of a person's health than does the amount of fat they ate in their diet regularly.

When we focus on lifestyle factors of a disease we may inadvertently be *blaming* individuals who get ill. "Didn't that person eat properly?" "I think I saw that person smoking once." Sometimes, we get caught up in lifestyle factors. They make up the majority of heart disease messages that we hear in the media. But in reality it is unfair to assume that a person's diet, exercise schedule, smoking, or drinking habits are entirely to blame for heart disease. Often times, a person's health is the result of factors that they cannot control. Personally, I include a variety of healthy components in my lifestyle. I also encourage my loved ones to do the same and feel that healthy living is part of a balanced life. However, I'm weary about the benefits of believing in healthy living when people start feeling guilty if they develop signs of illness. The emphasis on lifestyle

aspects of heart disease in our culture overshadows other important elements of the disease.

What can we learn from all of this? To consider all of the ingredients involved in diseases such as heart disease. Of course it's important to pay attention to all those lifestyle messages that we hear in the media. Many of these messages carry positive health information. But, it is just as important to be fully informed about the many causes of ill health that extend beyond lifestyle factors. The broader social, political, economic environments that we live in have an important impact on our health. Fostering these aspects of our lives as well as our daily lifestyle habits is the best way to reduce heart disease in our community. There needs to be more media space and public awareness efforts devoted to understanding the integrated aspects of a disease like heart disease. Collectively working together to nurture an environment that encourages equality, social justice, and community, instead of pointing a finger at an individual's lifestyle is a good start. Health and social policies that constrain financial, social and living support damage the health of our community. Support policies that address community services and income distribution as well as the promotion of healthy lifestyles. Lets remember to look at the big picture of health.

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